SUB-ZERO®

700 Series

Service & Parts Manual

 JOB AID #3754810 (Revision A - Reprinted April/2000)

SECTION 1

GENERAL INFORMATION

TABLE OF CONTENTS

INTRODUCTION

This manual has been prepared for your use in servicing Sub-Zero 700 Series units. Included are helpful facts on service, troubleshooting, specifications and parts information.

It is important that you familiarize yourself with the product as much as possible before initiating any maintenance, troubleshooting or repairs.

IMPORTANT: Always refer to the most current Service Parts Price List for any parts that have been superceded by serial number.

The model and serial number tag is located above the top left drawer slide assembly. Always have this information available when contacting the Sub-Zero Technical Assistance Department, and whenever ordering parts from the Parts Distributor.

TECHNICAL ASSISTANCE

If you should have any questions regarding the 700 Series and/or this manual, please contact:

Sub-Zero Freezer Company, Inc.
ATTN: Service Department
P.O. Box 44988
Madison, WI 53744 - 4988

Customer Service & Parts / Warranty Claims
Phone #: (800) 222 - 7820

Technical Assistance
Phone #: (800) 919 - 8324

Customer Service & Technical Assistance
Facsimile #: (608) 441 - 5887

Parts / Warranty Claims
Facsimile #: (608) 441 - 5886

Service Department E-Mail Address:
customerservice@subzero.com

Office Hours:
7:00 AM to 7:00 PM Central Time
Monday through Friday

This manual is designed to be used by Authorized Service Personnel only. Sub-Zero Freezer Co., Inc. assumes no responsibility for any repairs made on Sub-Zero refrigeration units by anyone other than Authorized Service Technicians.

IMPORTANT SAFETY INFORMATION

At right are the Product Safety Labels used in this manual. The "Signal Words" used are WARNING or CAUTION.

Below the Product Safety Labels is a description of the precautions to be taken when the signal word is observed.

When reviewing this manual, please note these different safety labels places in areas where awareness of personal safety and product safety should be taken.

⚠WARNING
Indicates that hazards or unsafe practices could result in severe personal injury or death.

⚠CAUTION
Indicates hazards or unsafe practices could result in minor personal injury or product and/or property damage.

SECTION 2

COMPONENT INFORMATION

DOOR ASSEMBLY

The door assembly consists of the
- door liner
- frame
- sheet metal pan
- solid foam core.

A magnet is installed beneath the door liner at the top of the door. As the door opens and closes, the magnet aligns with a sensor located behind the control panel at the top of the compartment. This sensor activates the lights and door alarm.

The door gaskets on a 700 Series are pressed into a retaining channel in the door liner (Figure 2-1).

There are molded grooves in the end caps of the adjustable door shelves and dairy compartment assembly. To position the adjustable door shelves and dairy compartment assembly, slide the grooves in the end caps over the knobs formed in the door liner (Figure 2-2).

NOTE: *Only models 700TC/I and 700TR come equipped with the dairy compartment assembly.*

DRAWER ASSEMBLY

General

Drawer assemblies consist of
- a drawer front liner
- drawer front frame
- drawer front sheet metal pan
- solid foam core
- coated steel drawer tub
- removable drawer divider
- electronic control panel*

** On models 700BR and 700 BF/I, the upper drawer assembly contains the electronic control panel.*

NOTE: *Freezer drawer tubs (700TC/I, 700TF/I, 700BF/I) have air vents necessary for proper air flow, and are not interchangeable with solid refrigerator drawer tubs (700TR, 700BR).*

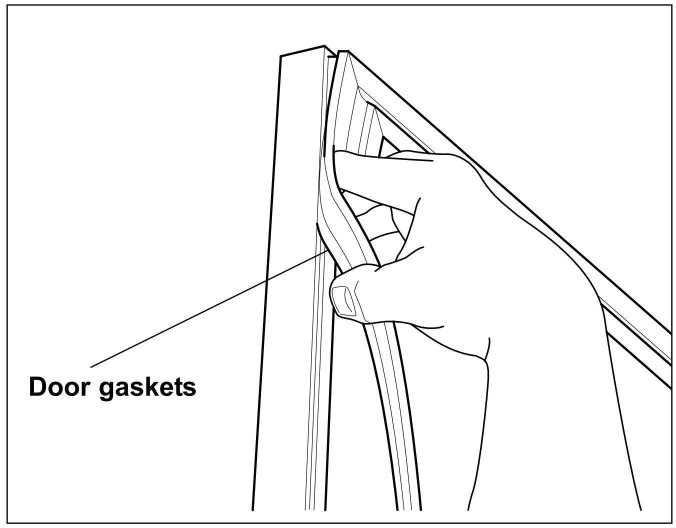


Figure 2-1. Door Gaskets

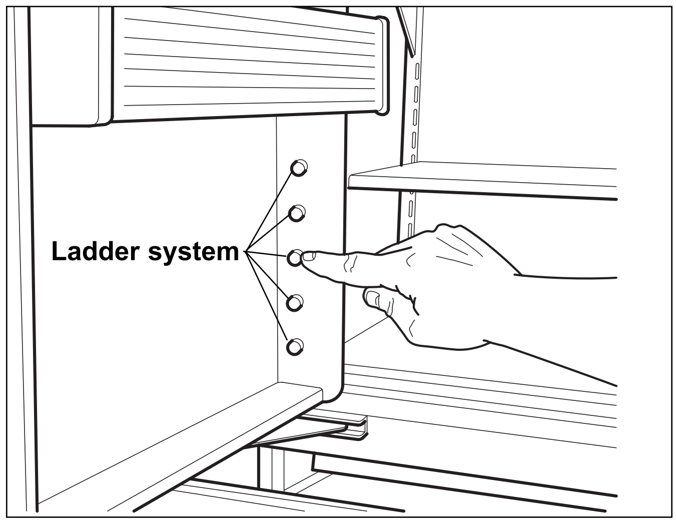


Figure 2-2. Door Shelves and Dairy Compartment

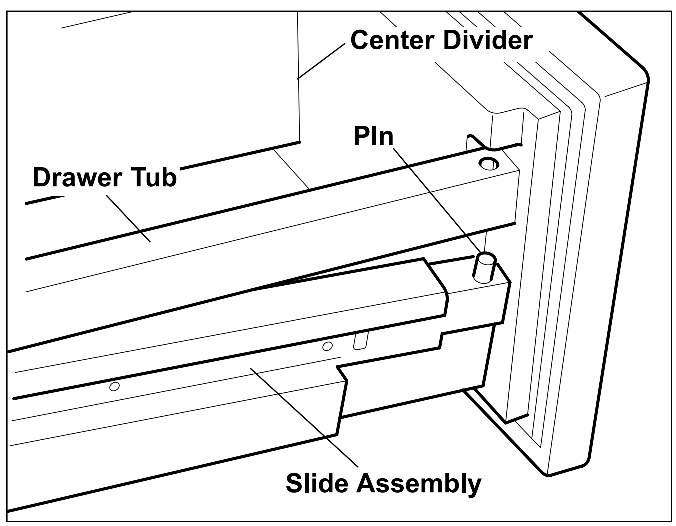


Figure 2-3. Drawer Removal

Drawer Removal and Installation

⚠CAUTION
On 700BR and 700BF/I, the top drawer has a control cable that must be disconnected before drawer removal.

1. Base-Unit Top Drawer Removal:
    a. Pull top drawer forward 6” to 10”, lift up off of the pins at front. Continue to pull drawer forward while pushing slide assemblies back. Then lie drawer face down, directly in front of unit.
    b. Disconnect display cable from left of rear duct by turning counterclockwise and pulling (Figures 2-4, 2-5 & 2-6).
2. Drawer Removal: To remove all other drawers, pull drawer forward 6” to 10”, lift up off of the pins at front. Continue to pull drawer forward off of slide assembly (Figure 2-3).
3. Drawer Re-installation: Extend slide assemblies forward and lay drawer tub side flanges over slide assemblies. From underneath, pull slide assembly forward until pins at front line up with drawer tub locating holes.

***NOTE:** Right slide assembly must be positioned between right side drawer tub flange and peg at back right corner of drawer assembly.*

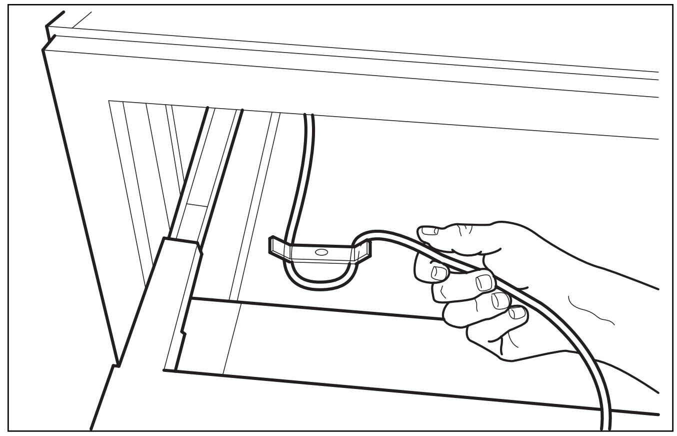


Figure 2-4. Display Cable

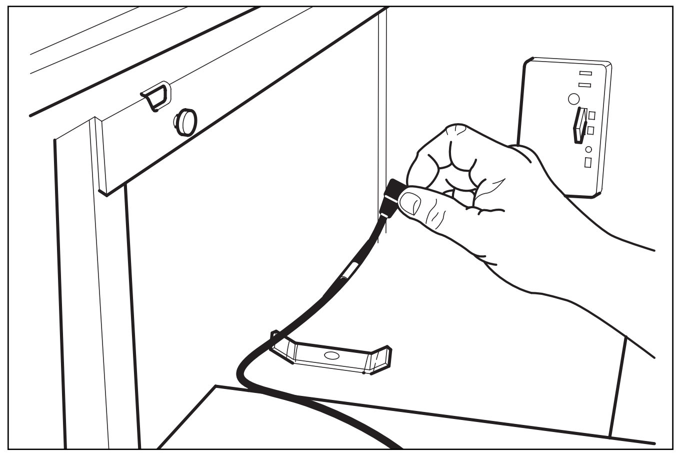


Figure 2-5. Display Cable

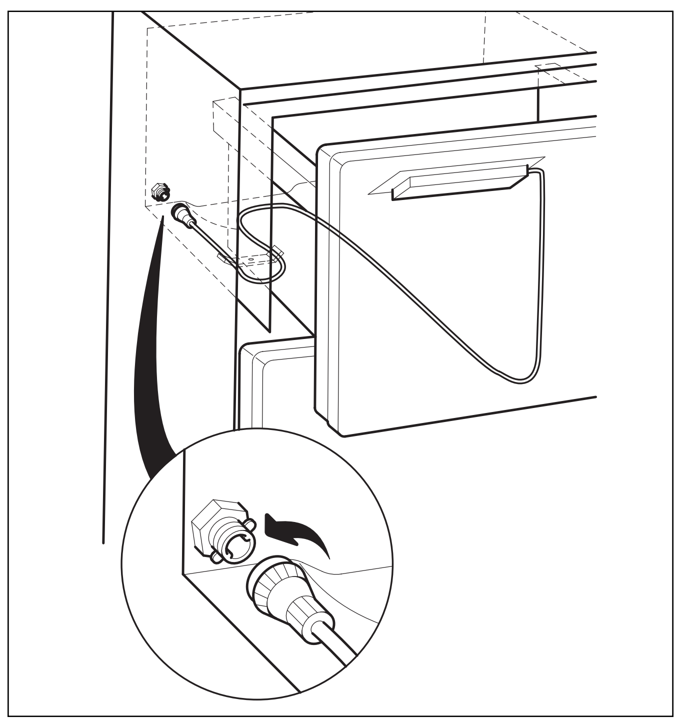


Figure 2-6. Display Cable

ELECTRONIC CONTROL SYSTEM

The 700 Series electronic control system consists of a control board and a display board. The control board includes the microprocessor relays, low voltage transformers, electrical connections and an alarm buzzer. The display board, which is part of the control panel, includes an LCD (Liquid Crystal Display), input buttons for setting controls, and an alarm button. Below are instructions for setting temperatures and for control panel removal.

NOTE: *If the door is open for more than 15 seconds the alarm will sound. The alarm can be disabled by pushing the ALARM button (Figure 2-7). The alarm will default to ON after a power outage.*

Temperature Settings

Normal operation of the display shows the temperature of each zone (or compartment) at five second intervals. The appropriate zone indicator lights up when the corresponding temperature is displayed. The following steps are necessary to adjust temperatures.

1. Press ZONE key to show the temperature set point for each zone (See Figure 2-8). Press the zone key until the desired zone is flashing on the LCD.
2. Press the WARMER or COLDER key to achieve the desired temperature (Figure 2-8). When setting is complete, wait for five seconds and the control will return to normal operation.

NOTE: *To adjust temperatures in next zone, repeat steps 1 and 2 above.*

Upper Control Panel Removal
Models 700TR, 700TC/I, 700TF/I

1. Remove the rear mounting screws at the back of the light diffuser.

NOTE: *Do not remove the light diffuser to access the mounting screws. Look behind the diffuser panel (Figure 2-7).*

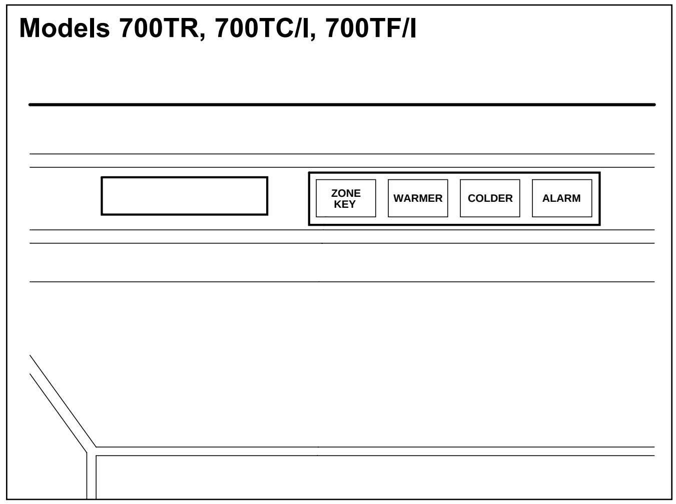


Figure 2-7. Electronic Control Panel

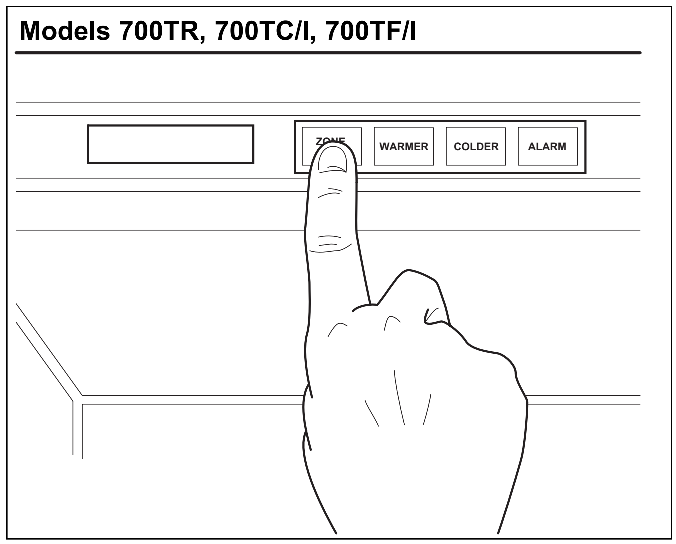


Figure 2-8. Control Panel

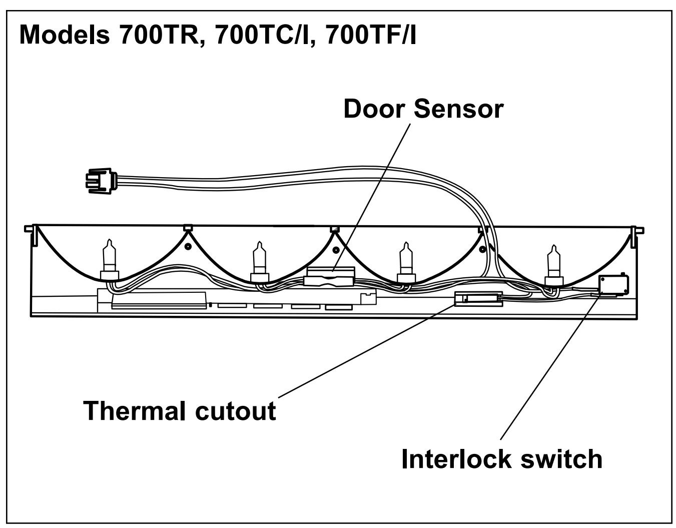


Figure 2-9. Control Panel Electrical Connections

2. To open the upper control panel front, grasp the outer top corners and pull down.
3. Disconnect the leads supplying power to the control panel. Remove the three front mounting screws. The center screw is the ground screw (Figure 2-9).
4. Pull the complete upper control assembly forward and down, (which includes the control board, glass light diffuser, reflectors and halogen lamps (Figure 2-9).
5. Disconnect electrical supply at the top of upper control panel assembly (Figure 2-10).

NOTE: *Reverse steps 1 - 5 to reassemble. Make sure ground screw is used at front center only.*

⚠WARNING
Halogen lamps are extremely hot! Allow lamp to cool before attempting to handle.

⚠CAUTION
Do not touch lamp with bare hands. Oils from skin will reduce the life of the lamp. If lamp is touched with bare hands, clean lamp with denatured alcohol and wipe dry with lint free cloth.

Control Panel Removal
Models 700BR, 700BF/I

1. Remove the three screws inside top drawer assembly (Figure 2-11). Then tilt control panel towards back of the drawer tub.
2. Now disconnect the power supply to the control panel (Figure 2-12).

NOTE: *Reverse steps to reassemble.*

Models 700BR, 700BF/I

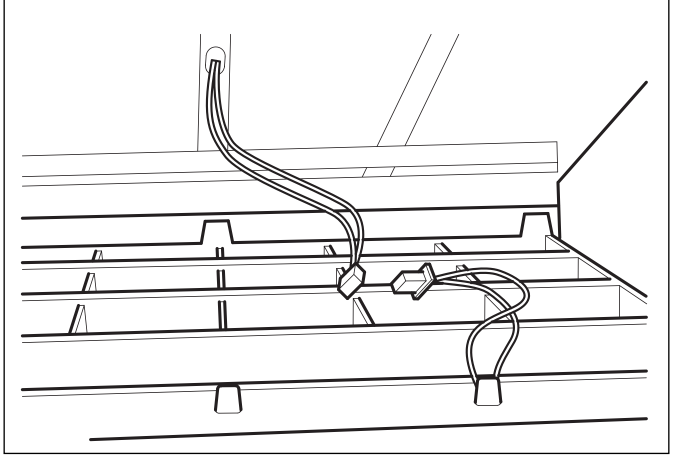


Figure 2-10. Control Panel Electrical Supply

Models 700BR, 700BF/I

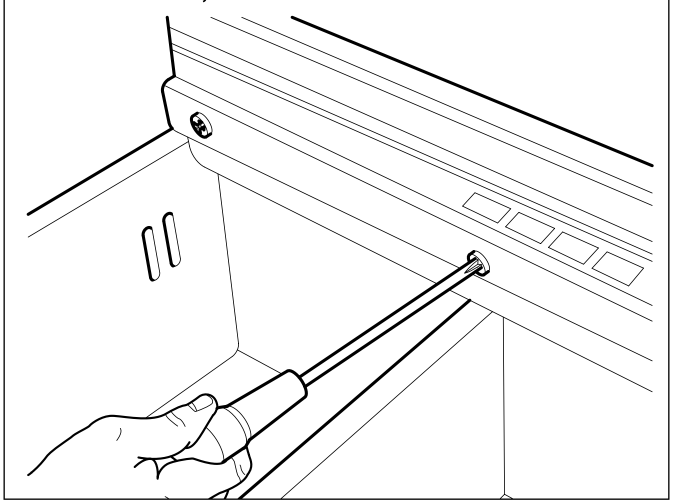


Figure 2-11. Control Panel Screws

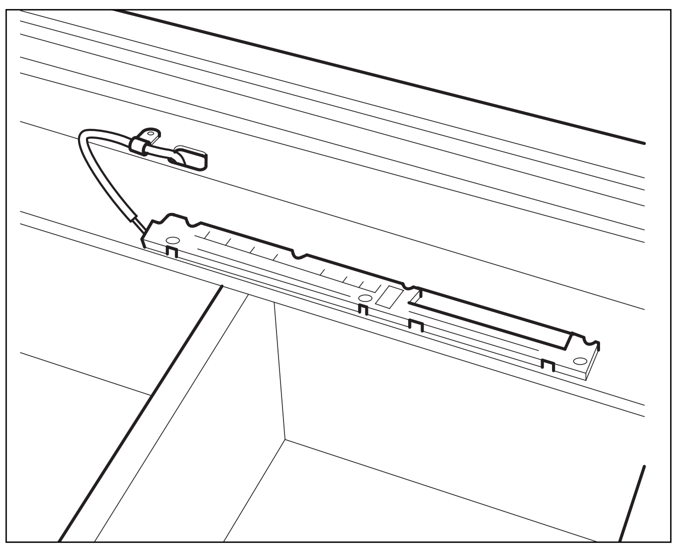


Figure 2-12. Control Panel Power Supply

CONTROL BOARD/MICROPROCESSOR

The control board contains the microprocessor which processes information throughout the rest of the cabinet, through thermistors, wiring and relays. The control board is also equipped with terminals to test for failed or failing components. For proper testing, please refer to the Troubleshooting Guide. The location of the control board is described below, along with the procedure for accessing it.

NOTE: *Removing both drawers (all models) and the lower mullion divider (700TR & 700BR only) will allow more room for control board access.*

Control Board Location and Access

MODELS 700TR, 700TC/I, 700TF/I

The control board is located in the ceiling of the upper drawer compartment (Figure 2-13).

1. To access the control board, pull top drawer forward 6" to 10", lift up off of the pins at front. Continue to pull drawer forward off of slide assembly.
2. Remove eight screws from the microprocessor cover and let the cover drop down to expose the control board (Figure 2-13).

MODELS 700BR, 700BF/I

The control board is located on the right hand side of the evaporator sump area (Figure 2-14).

1. To access the control board assembly, first remove the drawer assemblies by pulling forward and lifting off of pins at front.

> **⚠CAUTION**
>
> **The top drawer of the 700BR & 700BF/I have a control cable that must be disconnected before drawer removal (See Drawer Removal Instructions).**

2. Now remove the evaporator cover by removing six retaining screws, then pull the evaporator cover towards you to expose the sump area.
3. Disconnect the electrical connections and slide the gray control board housing up and out of the sump.

Models 700TR, 700TC/I, 700TF/I

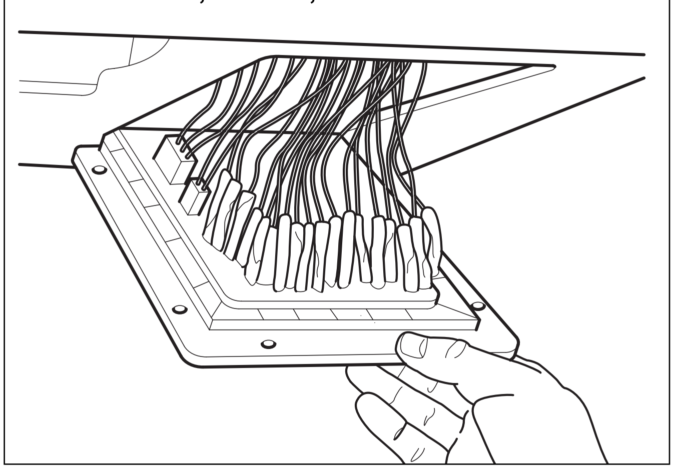


Figure 2-13. Control Board Location

Models 700BR, 700BF/I

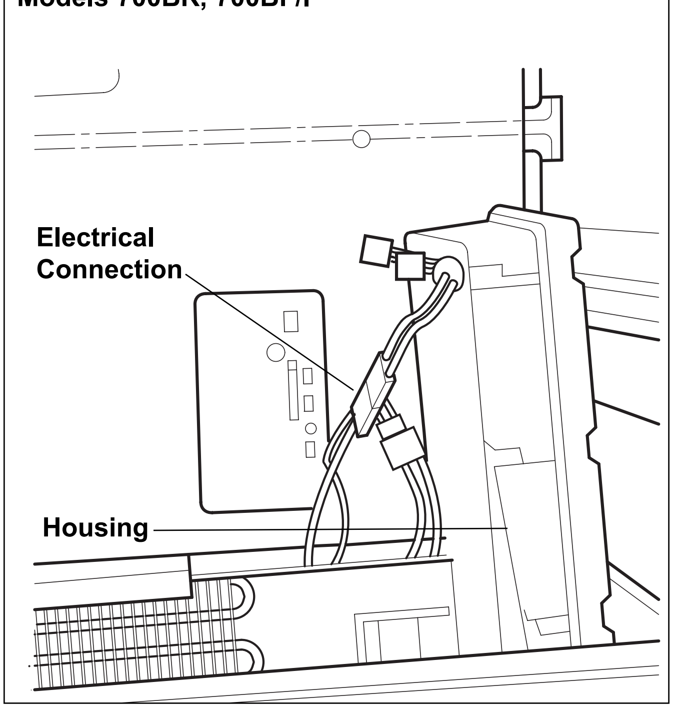


Figure 2-14. Evaporator/Sump Area

ZONE THERMISTORS

In the 700 series, it is possible to independently control temperatures in each zone. This is accomplished in part by thermistors, which are simply resisters that change resistance as the surrounding temperature changes. The microprocessor constantly monitors the thermistor's electronic signal and, as resistance changes, the microprocessor electronically reads the signal as temperature. In turn, the microprocessor initiates compressor and condenser fan run time, evaporator fan motor run time, when the baffles open and close for proper air flow, and determines the proper timing and duration of defrost. Zone thermistor location is described below, along with an explanation of their function, and the procedure for their replacement.

Zone Thermistor Location and Removal

MODELS 700TF/I, 700BF/I

The input temperature range in all these freezer models is from -5°F to +5°F, and is uniform throughout the cabinet. In other words, there is one zone and one thermistor for that zone. The thermistor is located behind the upper drawer in the reed switch assembly (Figure 2-15).

1. To replace the thermistor, the complete reed switch assembly must be replaced. Remove the mounting screw, tilt the top of the reed switch assembly forward and disconnect the electrical connector.

⚠ CAUTION
The top drawer in the 700BF/I has a control cable that must be disconnected before drawer removal (See Drawer Removal Instructions).

NOTE: *Be sure to check Troubleshooting Guide for proper thermistor testing procedures.*

NOTE: *The upper and lower reed switches are not interchangeable in the models 700 TF/I and 700BF/I (Figure 2-19).*

MODELS 700TR, 700BR

The input temperature range in all these refrigerator models is from 34°F to 45°F. Each compartment, or zone, can be independently temperature controlled up

Models 700TF/I, 700BF/I

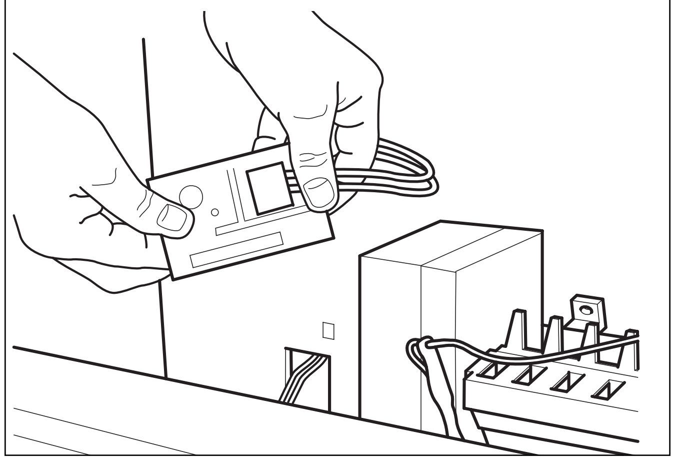


Figure 2-15. Thermistor Location

Models 700TR, 700TC/I, 700TF

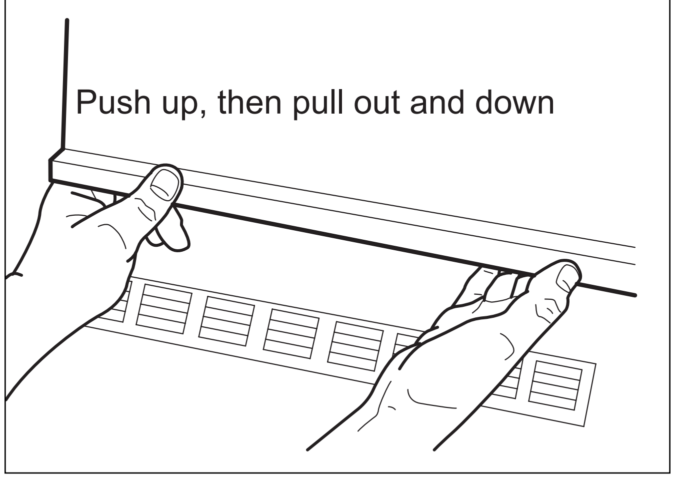


Figure 2-16. Back Duct Removal

Models 700TR, 700BR

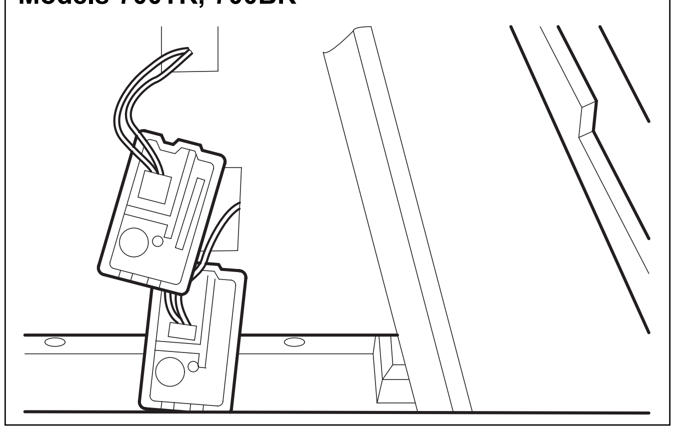


Figure 2-17. Thermistors In Reed Switch

to 3°F colder than the zone above it. Therefore a thermistor is used in each compartment (three thermistors in the 700TR and two in the 700BR). (See example, Figure 2-18). The thermistor in the upper cabinet zone of the 700TR (behind the back duct cover) and the thermistor in the upper drawer zone of the 700BR (inside the reed switch) govern compressor run time .

1. To access the thermistor in the upper cabinet zone of the 700TR, lift the bottom of the back duct cover up, then pull forward and down (Figure 2-16). Once the cover is removed, the thermistor is exposed at the bottom right rear wall, remove the clamp and disconnect the electrical connection to remove.

***NOTE:** Be sure to check Troubleshooting guide for proper thermistor testing procedures.*

2. Thermistors are located in each reed switch behind the drawer assemblies of each compartment (Figure 2-17). To replace the thermistor the complete reed switch assembly must be replaced. Simply remove the reed switch mounting screw, tilt the top of the reed switch assembly forward and disconnect the electrical connector.

⚠ CAUTION
The top drawer in the 700BR has a control cable that must be disconnected before drawer removal (See Drawer Removal Instructions).

***NOTE:** Be sure to check Troubleshooting Guide for proper thermistor testing procedures.*

MODEL 700TC/I

The input temperature range in the combination refrigerator/freezer model is from 34°F to 45°F in the upper refrigerator zone, and -5°F to +5°F in the freezer drawer zone. Though the thermistor in the freezer operates the compressor, both zones can be independently temperature controlled. This is possible because the thermistor in the upper refrigerator zone (behind the back duct cover) regulates an air baffle in the sump area. If the freezer drawer zone has reached its setpoint, yet the upper refrigerator zone is warm, the compressor will cycle off but the evaporator fan will continue to run, forcing cool air through the baffle up to the refrigerator

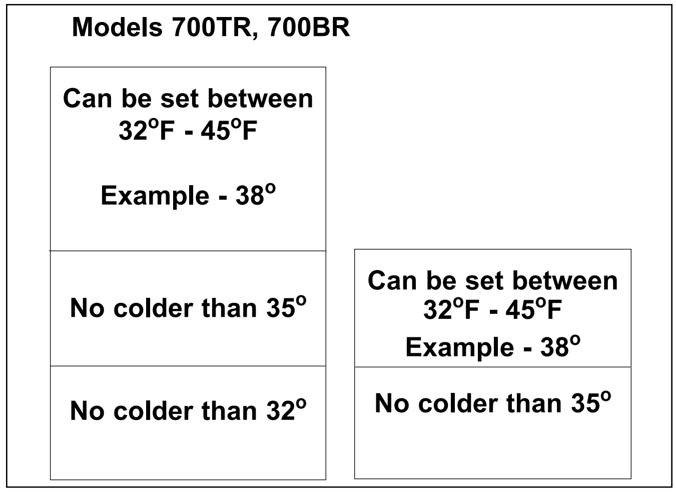


Figure 2-18. Thermistor Control Example

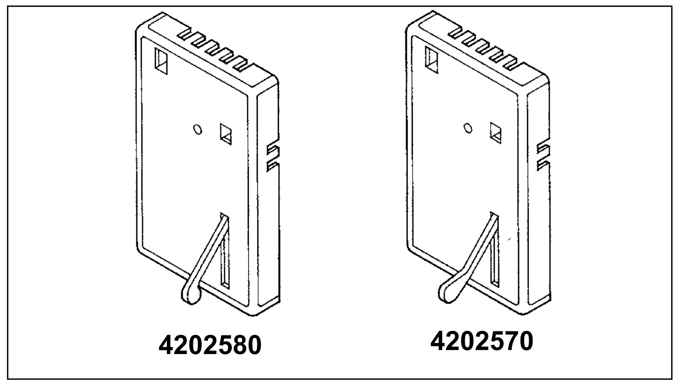


Figure 2-19. Reed Switches

zone until it reaches its setpoint. If the refrigerator zone has reached setpoint, but the freezer zone has not, the baffle is closed.

1. To access the thermistor in the upper refrigerator zone, lift the bottom of the back duct cover up, then pull forward and down (Figure 2-16). Once the cover is removed, the thermistor is exposed at the bottom right rear wall, remove the clamp and disconnect the electrical connection to remove.

2. The temperature in the freezer drawer zone is uniform between both drawers, therefore only one thermistor is used. The thermistor is located behind the upper drawer in the reed switch assembly (Figure 2-15). To replace the thermistor, the complete reed switch assembly must be replaced. Simply remove the mounting screw, tilt the top of the reed switch assembly forward and disconnect the electrical connector.

***NOTE:** Be sure to check Troubleshooting Guide for proper thermistor testing procedures.*

AIR BAFFLES
Models 700TR, 700TC/I, 700BR Only

OPERATION

A baffle will normally be closed until the corresponding zone calls for cooling.

A baffle will default to open if the corresponding thermistor is defective or unplugged.

Generally, all baffles will be closed when the compressor is off. But, if a zone is warmer than its setpoint, and the compressor cycles off, the baffle for that zone will remain open and the evaporator fan will continue to run.

All baffles will be closed during defrost and the fan delay period following a defrost.

LOCATION

MODELS 700TR, 700BR

There are two baffles attached on the left hand side of the lower air duct, one behind each drawer.

MODEL 700TC/I

There is one baffle mount assembly located at top left of the evaporator sump area (Figure 2-20).

MODELS 700TF/I, BF/I

These models have no baffles.

REMOVAL

MODELS 700TR, 700BR

1. Remove both drawer assemblies.
2. Now remove the lower mullion divider by pushing up from underneath, then remove both mullion divider supports (Figure 2-23).

⚠ CAUTION
The top drawer in the 700BR has a control cable that must be disconnected before drawer removal (See Drawer Removal Instructions).

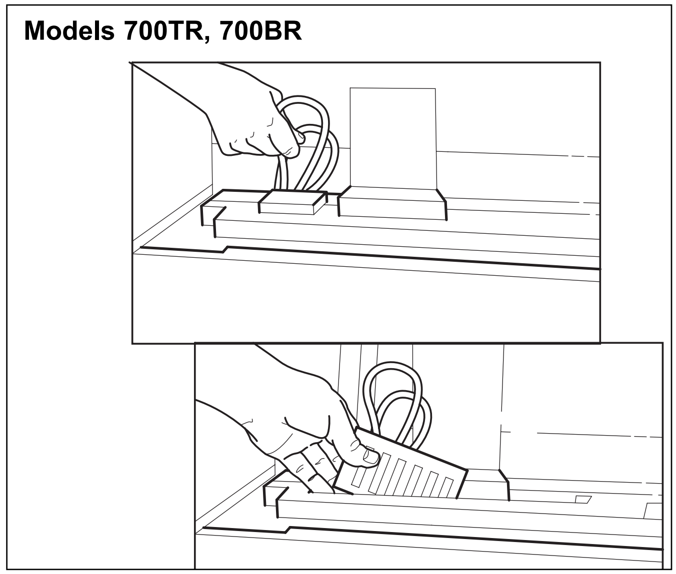


Figure 2-20. Baffle Mount Assembly

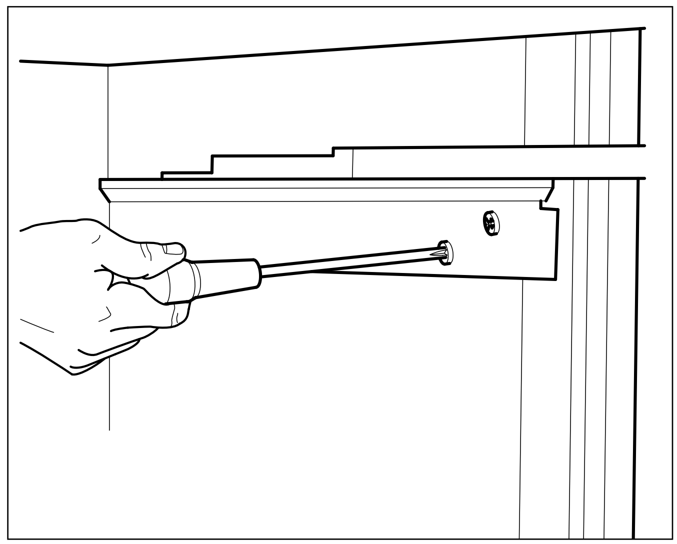


Figure 2-21. Drawer Slides

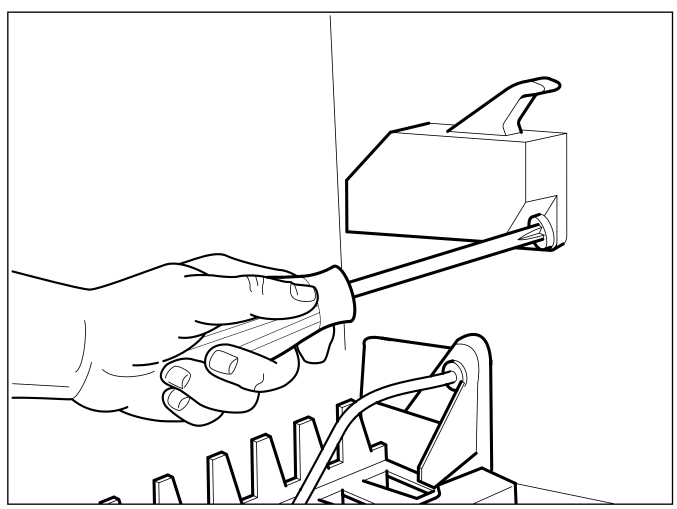


Figure 2-22. Drawer Closer

3. Detach all four drawer slides by removing four mounting screws (Figure 2-21).
4. Remove both drawer closers by removing two mounting screws (Figure 2-22).
5. Remove both reed switches by unscrewing the mounting screw, tilt the top of the reed switch assembly forward and disconnect the electrical connector (Figure 2-17).
6. Now remove three screws at the front and back of the evaporator cover, then remove the evaporator cover. Remove the air duct retaining screw by the bottom left corner. Pull the bottom of the air duct forward and disconnect the electrical connectors to the air baffles, then remove the air duct from the unit.

NOTE: *The baffles are applied with double stick tape to the back of the air duct and will need to be pried off.*

NOTE: *On 700BR the cabinet harness will need to be disconnected from the air duct assembly by turning the retaining nut counterclockwise at the connector.*

MODEL 700TC/I

1. Remove both drawer assemblies. Now detach all four drawer slides by removing four mounting screws (Figure 2-21).
2. Remove the icemaker if applicable.
3. Remove both drawer closers by removing two mounting screws (Figure 2-22).

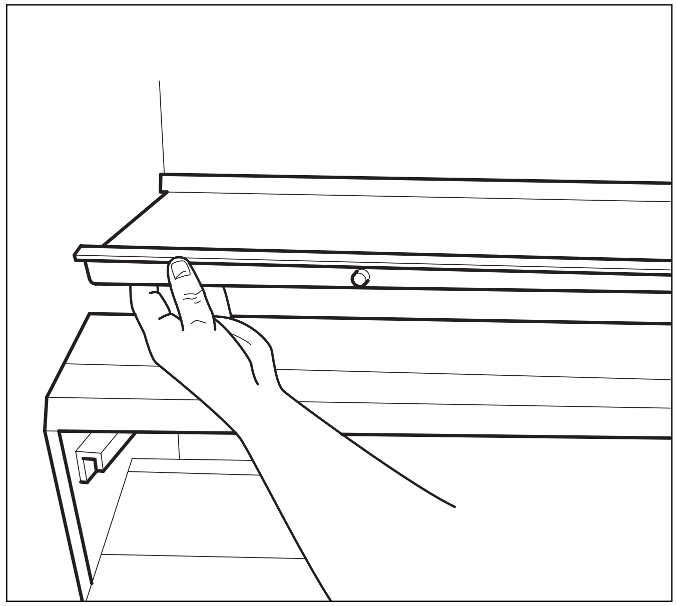


Figure 2-23. Center Divider

4. Remove both reed switches by unscrewing the mounting screw, tilt the top of the reed switch assembly forward and disconnect the electrical connector (Figure 2-17).
5. Remove three screws at the front and back of the evaporator cover, then remove the evaporator cover. Remove the air duct retaining screw by the bottom left corner. Pull the bottom of the air duct forward and remove the air duct from the unit.

   The air baffle or baffle mount assembly (styrofoam block) is located at top left of the evaporator sump area (Figure 2-20). Lift the baffle mount assembly up and unplug the electrical connection.

EVAPORATOR SUMP

The evaporator sump area consists of the following components.

- Evaporator/Heat Exchanger Assembly
- Evaporator Fan Motor Assembly
- Cal Rod Defrost Heater (700TC/I, 700TF/I, 700BF/I Only)
- Defrost Terminator (700TC/I, 700TF/I, 700BF/I Only)
- Evaporator Thermistor
- Control Board Assembly (700BR, 700BF/I Only)
- Baffle Mount Assembly (700TC/I Only)

Sump Area Access

1. Remove both drawer assemblies.

⚠ CAUTION
The top drawer in the 700BR and 700 BF/I has a control cable that must be disconnected before drawer removal (See Drawer Removal Instructions).

2. Remove the lower mullion divider by pushing up from underneath (Figure 2-23), then remove both mullion divider supports (700TR & 700BR Only).
3. Remove the icemaker if applicable.
4. Detach all four drawer slides by extracting four mounting screws (Figure 2-21).
5. Remove both drawer closers by extracting two mounting screws (Figure 2-22).
6. Remove both reed switches by unscrewing the mounting screw, tilt the top of the reed switch assembly forward and disconnect the electrical connector (Figure 2-17).
7. Remove three screws at the front and back of the evaporator cover, then remove the evaporator cover. Remove the air duct retaining screw

Models 700TR, 700BR

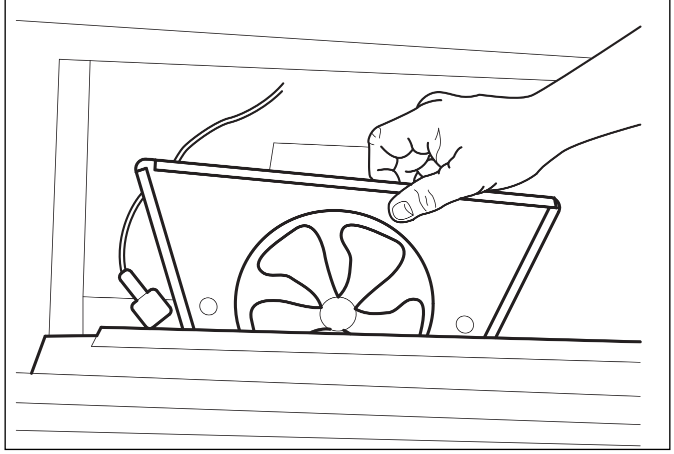


Figure 2-24. Evaporator Fan Motor Assembly

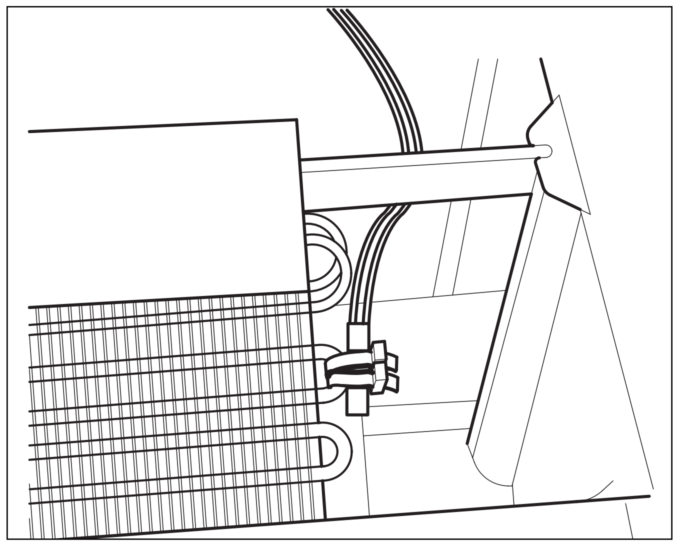


Figure 2-25. Evaporator

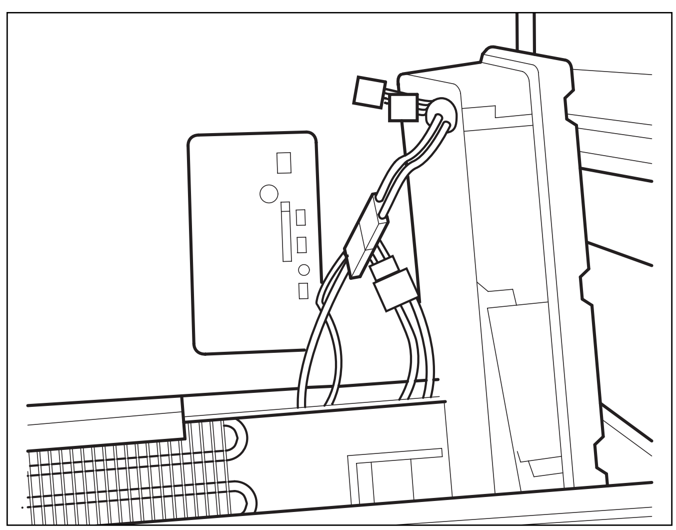


Figure 2-26. Microprocessor Assembly

by the bottom left corner. Pull the bottom of the air duct forward and disconnect the electrical connectors to the air baffles (700TR & 700BR Only), then remove the air duct from the unit.

NOTE: On 700BR & 700 BF/I the cabinet harness will need to be disconnected from the air duct assembly by turning the retaining nut counter clockwise at the Methode Connector.

Sump Component Removal

NOTE: *Before attempting any service in the sump area, you must follow the steps in SUMP AREA ACCESS on the previous page.*

EVAPORATOR FAN MOTOR ASSEMBLY

NOTE: On 700BR & 700 BF/I the cabinet harness will need to be disconnected from the air duct assembly by turning the retaining nut counter clockwise at the Methode Connector.

1. Disconnect electrical connector at top rear of fan motor assembly, then slide the evaporator fan motor up and out (Figure 2-24).
2. To reinstall, insert bottom of fan assembly into slot, being sure that bottom flange is secured, and that there is no play front to back.

DEFROST TERMINATOR (700TC/I, 700TF/I, 700BF/I ONLY)

Unclip terminator at right of evaporator (note location), disconnect electrical connection and lift out.

EVAPORATOR THERMISTOR

Cut cable ties holding thermistor to evaporator (note location), disconnect electrical connection and lift out. (Figure 2-25).

CONTROL BOARD ASSEMBLY (700BR & 700BF/I ONLY)

To remove the control board assembly simply disconnect the electrical connections and slide the assembly up and out (Figure 2-26).

BAFFLE MOUNT ASSEMBLY (700 TC/I ONLY)

The baffle mount assembly (styrofoam block) is located at top left of the evaporator sump area. Lift the baffle mount assembly up and unplug the electrical connection. (Figure 2-20).

EVAPORATOR ASSEMBLY

1. Unplug evaporator fan assembly and remove.
2. Unplug defrost heater, terminator, and coil sensor/thermistor (if applicable), but **DO NOT** remove from evaporator.
3. Cut tubing to and from evaporator, at evaporator. Pull evaporator assembly up out of sump.

NOTE: *Complete evaporator replacement instructions are supplied with replacement evaporator.*

DEFROST SYSTEM

Models 700TC/I, TF/I, BF/I

The electronic control in the 700TC/I, TF/I, BF/I regulates defrost intervals with what is called "Adaptive Defrost." With adaptive defrost, the length of time that the heater actually stays on to defrost the evaporator and satisfy the defrost terminator is sensed by the evaporator thermistor. The length of heater ON time determines the number of hours before the next defrost. For instance, if the heater stays on for a shorter time than normal, the electronic control increases the time between the next defrost. If the heater stays on for a longer time than normal, the electronic control decreases the time between the next defrost. This is an ongoing process whereby the defrost time and the defrost interval will vary by unit use.

NOTE: *To initiate a manual defrost, turn OFF master power switch for 10 seconds then turn back ON. The control will initiate defrost upon power up, provided the evaporator temperature is below 20°F. If the evaporator is warmer than 20°F, the evaporator thermistor must be disconnected before initiating defrost.*

NOTE: *If the evaporator thermistor fails, the electronic control will initiate defrost at 6 hour intervals and 20 minute defrost dwell. To test the evaporator thermistor, refer to Troubleshooting Guide.*

Models 700TR, 700BR

Since the 700TR and 700BR do not have defrost heaters, the evaporator defrosts during the compressor off cycle. If the compartment thermistor calls for cooling, but the evaporator thermistor is not sensing temperatures greater than 40°F, the evaporator fan will be energized but the compressor will not. This ensures complete evaporator defrost. As soon as the evaporator temperature reaches 40°F, the compressor is also energized.

NOTE: *If the evaporator coil is iced up and the compressor does not start, check the evaporator thermistor and replace if faulty. To test the evaporator thermistor, refer to the Trouble Shooting Guide.*

LIGHTING

The 700 Series utilizes Halogen lamps for interior lighting.

Power for the lights is supplied through a 12 volt transformer, which is controlled by a 5 volt circuit through a relay on the control board. This 5 volt circuit consists of the reed switches behind each drawer, the sensor behind the control panel (700TR, 700TC/I, 700TF/I only), the microprocessor and relays on the control board. When the microprocessor senses an "open door" signal from a reed switch or the sensor behind the control panel, power is relayed to the 12 volt transformer which then supplies power to the lighting in the appropriate compartment.

If the lights in the upper compartment of the 700TR, 700TC/I, or 700TF/I get too hot, a thermal cut-out in the upper control panel will interrupt power to lighting system. The lighting system will not operate until the lights cool back down.

NOTE: *There is no light terminator in the drawer area of 700 Series units.*

⚠WARNING
Halogen lamps are extremely hot! Allow lamp to cool before attempting to handle.

⚠CAUTION
Do not touch lamp with bare hands. Oils from skin will reduce the life of the lamp. If lamp is touched with bare hands, clean lamp with denatured alcohol and wipe dry with lint free cloth.

ELECTRONIC CONTROL SUMMARY

Setpoints Available

ALL REFRIGERATOR (700TR)

- Upper Cabinet Zone Temperature Range is 34°F to 45°F.
- Upper Drawer Zone can be controlled up to 3°F colder than Upper Cabinet Zone.
- Bottom Drawer Zone can be controlled up to 3°F colder than Upper Drawer Zone.

NOTE: *A lower zone can not be set warmer than the zone above it.*

ALL REFRIGERATOR (700BR)

- Upper Drawer Zone Temperature Range is 34°F to 45°F.
- Bottom Drawer Zone can be controlled up to 3°F colder than Upper Drawer Zone.

NOTE: *The lower zone can not be set warmer than the upper zone.*

COMBINATION REFRIGERATOR / FREEZER (700TC/I)

- Upper Cabinet Refrigerator Zone Temperature Range is 34°F to 45°F.
- Freezer Drawer Zone Temperature Range is -5°F to +5°F.

ALL FREEZER (700TF/I, 700BF/I)

- Unit Temperature Range -5°F to +5°F

Modes Displayed

SET MODE

Pushing the "ZONE" key will activate "SET MODE". This will display the set-point and the corresponding zone indicator will flash. Temperatures can then be adjusted in that zone by pushing the "WARMER" or "COLDER" keys. To advance to the next zone, press the zone key again. The set mode will remain active for five seconds after the last key stroke.

ERROR MODE

If a zone thermistor is defective or unplugged, the corresponding zone indicator will flash and either "-20" or "55" will be displayed.

NOTE: *To clear the error mode after a thermistor is replaced, the unit must be turned off for ten seconds, then back on.*

SHUTDOWN MODE

Attempting to set temperatures warmer than control limits causes a "SHUTDOWN MODE". In shutdown mode "--" will be displayed. All unit functions will be suspended except the lights and door alarm. To end shutdown mode, press the "COLDER" key.

Baffle Operation (700TC/I, 700BR Only)

- A baffle will normally be closed until the corresponding zone calls for cooling.
- A baffle will default to open if the corresponding thermistor is defective or unplugged.
- Generally all baffles will be closed when the compressor is off. But, if a zone is warmer than its setpoint, and the compressor cycles off, the baffle for that zone will remain open and the evaporator fan will continue to run.
- All baffles will be closed during defrost and the fan delay period following a defrost.

Compressor and Evaporator Fan Operation

COMPRESSOR NOTE: *The thermistor in the following compartments controls the compressor.*

MODEL	COMPARTMENT
700TF	Top drawer
700TC	Top Drawer
700TR	Cabinet
700BF	Top Drawer
700BR	Top Drawer

***EVAPORATOR FAN NOTE:** The evaporator fan is turned off when any door or drawer is opened. The fan is also off during a defrost and post-defrost period (fan delay period).*

ALL REFRIGERATOR (700TR, 700BR)

When the Upper Cabinet Zone in the 700TR or the Upper Drawer Zone in the 700BR calls for cooling, the evaporator temperature is checked. If the evaporator temperature is less than 40°F the compressor remains off, but the evaporator fan is started. With the evaporator fan running the temperature of the evaporator will rise. When the evaporator temperature rises above 40°F, the compressor is started.

***NOTE:** A defective evaporator thermistor will result in a 10 minute fan delay before the compressor can start.*

COMBINATION REFRIGERATOR / FREEZER (700TC/I)

When the freezer drawer zone calls for cooling, the evaporator fan cycles on with the compressor, except after a defrost. After a defrost the evaporator fan will not run until the evaporator temperature falls below 35°F. This is to avoid circulating warmer moist air from the evaporator condensation.

If the freezer drawer zone reaches its temperature set-point, but the upper cabinet refrigerator zone has not reached its temperature set-point, the compressor is cycled off, but the evaporator fan will continue to run.

***NOTE:** A defective evaporator sensor will result in a five minute fan delay before the compressor can start.*

ALL FREEZER (700TF/I, 700BF/I)

The evaporator fan cycles on and off with the compressor, except after defrost. After defrost the evaporator fan will not run until the evaporator temperature falls below 35°F. This is to avoid circulating warmer moist air from the evaporator condensation.

***NOTE:** A defective evaporator sensor will result in a five minute fan delay before the compressor can start.*

Defrost Operation

REFRIGERATOR MODELS (700TR, 700BR)

The 700TR and 700BR utilize an "off-cycle defrost". When the unit reaches the temperature setpoint, the compressor cycles off and the evaporator begins to defrost.

***NOTE:** If refrigerator runs 100% for six hours or more (due to a door left open), compressor will be turned off. This will allow for evaporator defrosting.*

FREEZER MODELS (700TC/I, 700TF/I, 700BF/I)

The electronic control in the 700TC/I, 700TF/I and 700BF/I regulates defrost intervals with what is called "Adaptive Defrost". With adaptive defrost, the length of time that the heater actually stays on to defrost the evaporator, and satisfy the defrost terminator, is sensed by the evaporator thermistor. The length of heater ON time determines the number of hours before the next defrost.

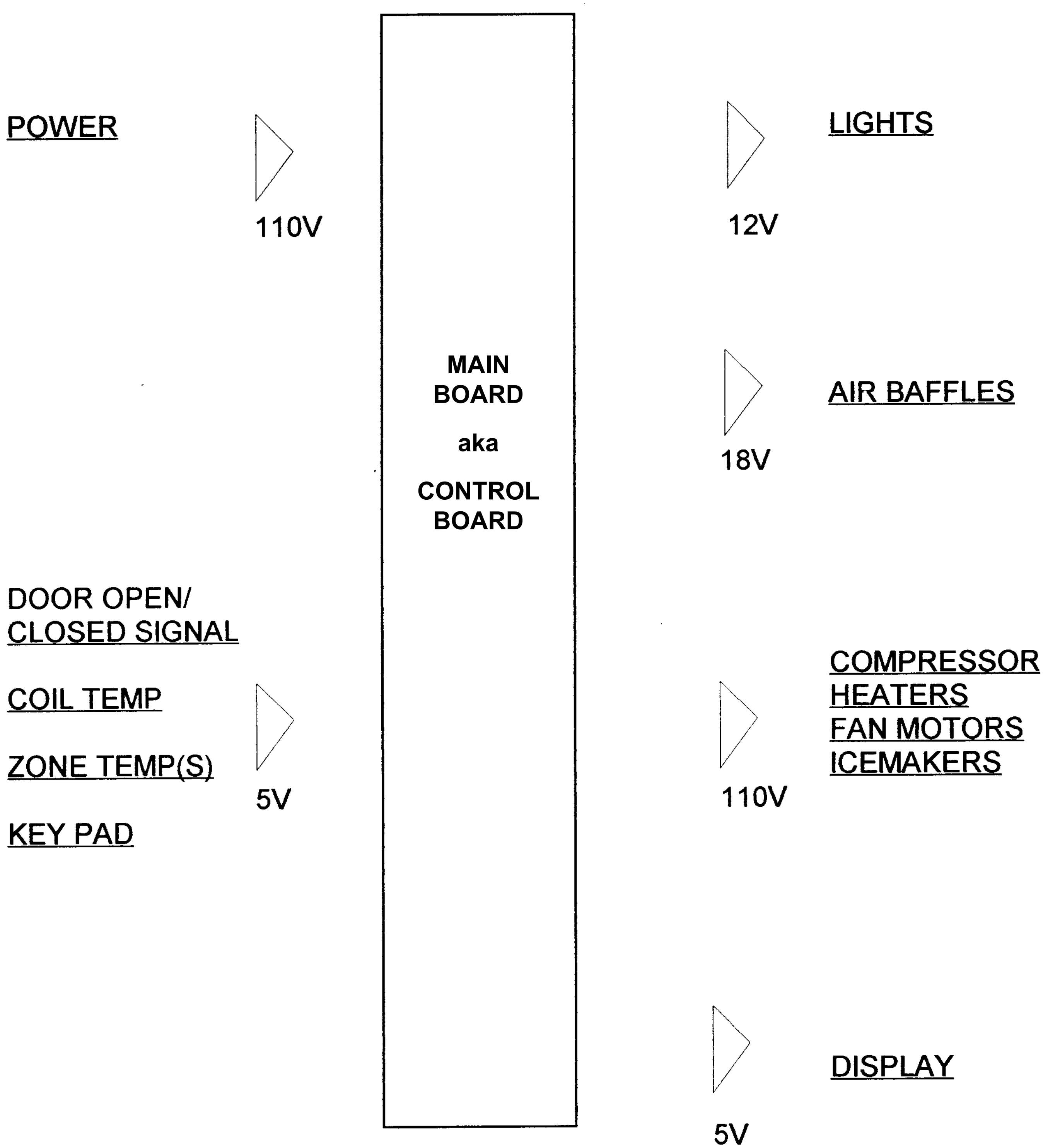
MANUAL DEFROST

To initiate a manual defrost, turn OFF master power switch for 10 seconds then back ON. The control will then initiate a defrost upon power up, provided the evaporator temperature is below 20°F.

***NOTE:** If the evaporator is warmer than 20°F, the evaporator thermistor must be disconnected before initiating defrost.*

The compressor will not cycle back on for 20 minutes (20 minute defrost dwell) if the evaporator thermistor has been disconnected (TC/I, TF/I, BFI Only).

ELECTRICAL SYSTEM OVERLAY



UNIT TRAY COMPARTMENT

The Unit Tray Compartment contains the unit tray assembly, master power switch, icemaker solenoid valve (700TFI, 700TCI, 700BFI only), 12 volt transformer, and evaporator sump drain tube heater.

Unit Tray Assembly

The removable unit tray assembly was designed for easy access to the compressor, condenser, condenser fan motor, and drain pan (Figure 2-27).

To remove the unit tray assembly, extract two screws (Figure 2-28) that secure the tray to the cabinet, located at the bottom left and right corner of the cabinet. After the screws are removed, the complete tray assembly can be slid forward to expose the components.

⚠ CAUTION
When pulling the tray forward care must be taken to not kink any tubing or rupture any weld joints.

Master Power Switch

The master power switch is located at the front left of the unit tray compartment and is removed by releasing the tabs at the back of the mounting bracket, then unplugging (Figure 2-28).

NOTE: *It is not necessary to slide the unit tray assembly out to access the master power switch.*

Icemaker Solenoid Valve (700TFI, 700TCI, 700BFI Only)

The solenoid valve is located at the top right of the unit compartment. To remove the solenoid valve, extract the retaining screw and remove the solenoid retainer (Figure 2-29). After the retainer is removed, slide the solenoid to the left. Then pull forward slightly, unplug the electrical connectors and disconnect the water line.

NOTE: *It is not necessary to slide the unit tray out to access the icemaker solenoid valve.*

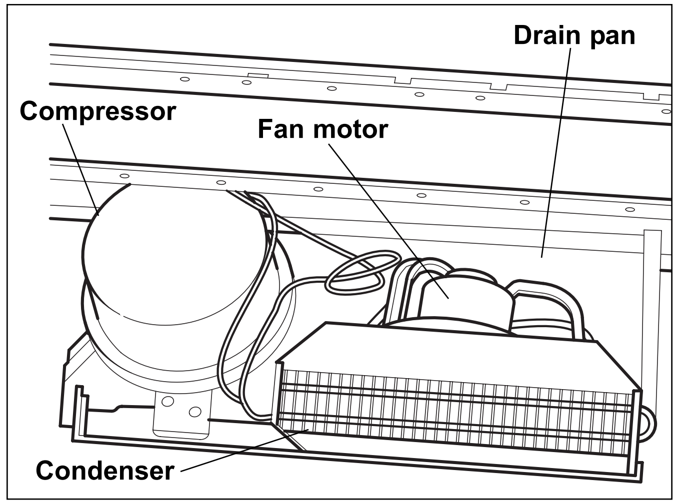


Figure 2-27. Unit Tray Assembly

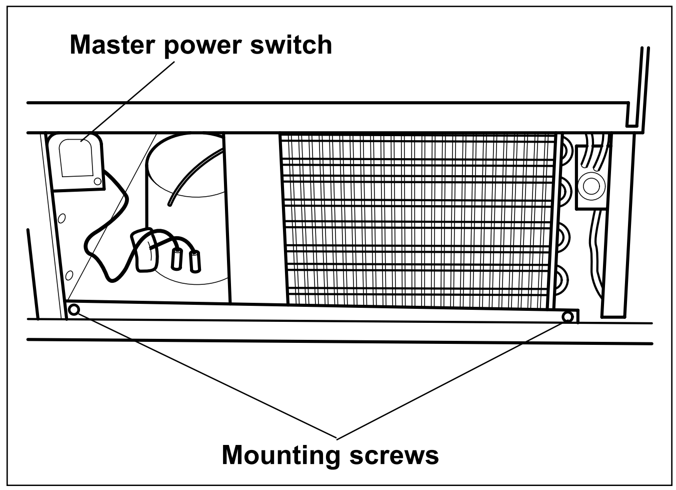


Figure 2-28. Mounting Screws

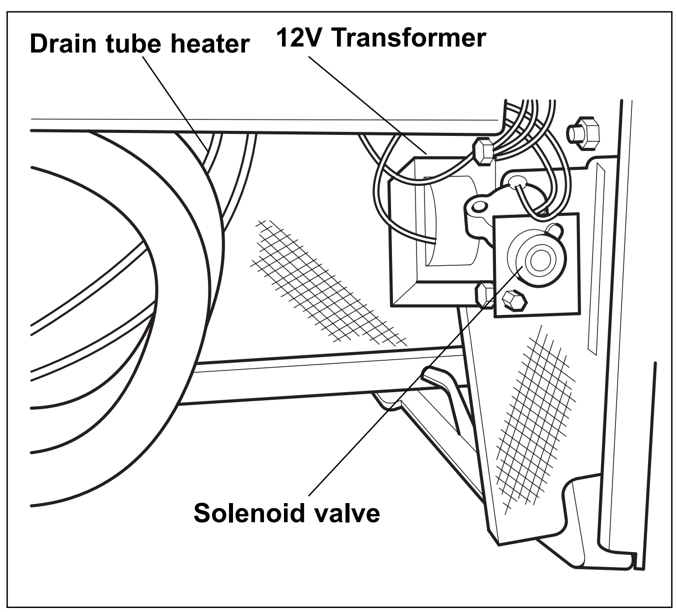


Figure 2-29. Solenoid

12-Volt Transformer

To access the transformer, slide the unit tray assembly out, then locate the transformer at the upper right side behind the water valve (if applicable). To remove the transformer, first remove two nuts, one in front and one in back of the transformer (Figure 2-29), then disconnect the electrical connection.

Evaporator Sump Drain Tube Heater

To access the drain tube heater, the unit tray assembly must be slid out. The drain tube heater is located in the unit tray area at the bottom of the evaporator sump (Figure 2-29). To remove the drain tube heater, pull it out of the sump drain tube, then disconnect the electrical connection located at the upper rear of the unit compartment.

NOTE: *When replacing the drain tube heater, it is necessary to feed the heater in through the drain tube, under the evaporator, approximately seven inches.*

SECTION 3

AIR FLOW

AIR FLOW

NOTE: *In all the following air flow illustrations the white arrow signifies Pushed Air, while the shaded arrow signifies Returned Air.*

Pushed Air	⇨	Return Air	⇨

Model 700TR (Figure 3-1)

The temperature for each compartment, or zone, in the 700TR can be independently controlled (up to 3°F colder than the zone above it) by the air baffle/duct divider system. Depending on the different zone requirements, the air baffles in each zone open and close as needed.

Air to the *bottom drawer zone* is directed behind the lower air duct, up the left side and through the air baffle behind the bottom drawer. The air then returns to the evaporator sump area through the vents in the evaporator cover.

Air to the *upper drawer zone* is directed behind the lower air duct, up the left side and through the air baffle behind the upper drawer. Air then returns through an opening in the lower air duct (at bottom right of upper drawer zone), back down behind the right side of the lower air duct to the evaporator sump area.

Air to the *top refrigerator zone* is directed behind the lower air duct, up the left side and continues up behind the upper duct in the top refrigerator zone where it is forced out at the top. The air then returns through an opening at the bottom right hand corner of the top duct, back down behind the right side of the lower air duct to the evaporator sump area.

Model 700TC/I (Figure 3-2)

The *freezer zone* has two vertical duct dividers behind the lower rear duct which separate the air to the refrigerator from air to the freezer.

Air to the *refrigerator zone* is directed through a baffle in the left side of evaporator sump area, then ducted up the left side to the refrigerator compartment. Air travels up behind the back duct in the

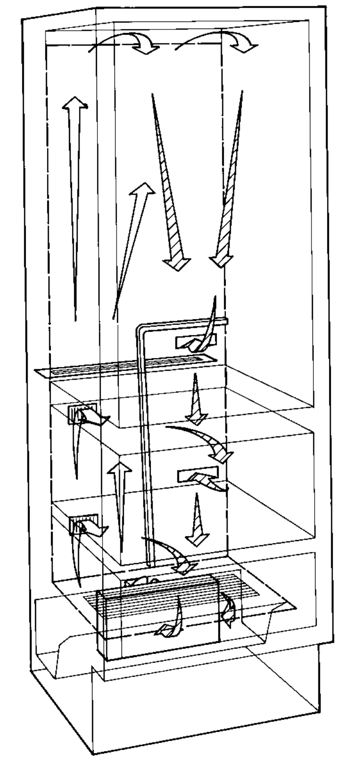


Figure 3-1. Model 700TR Air Flow

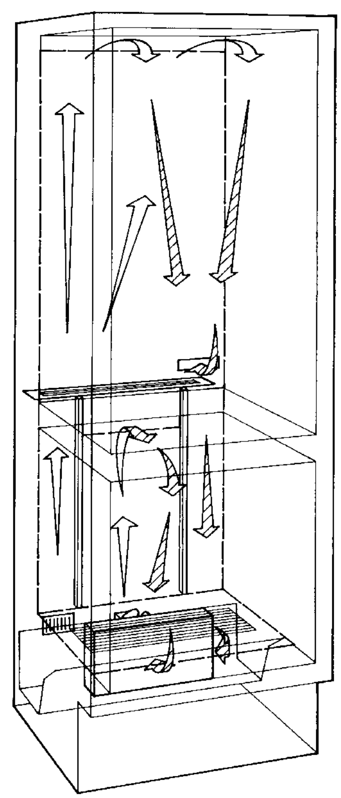


Figure 3-2. Model 700TC/I Air Flow

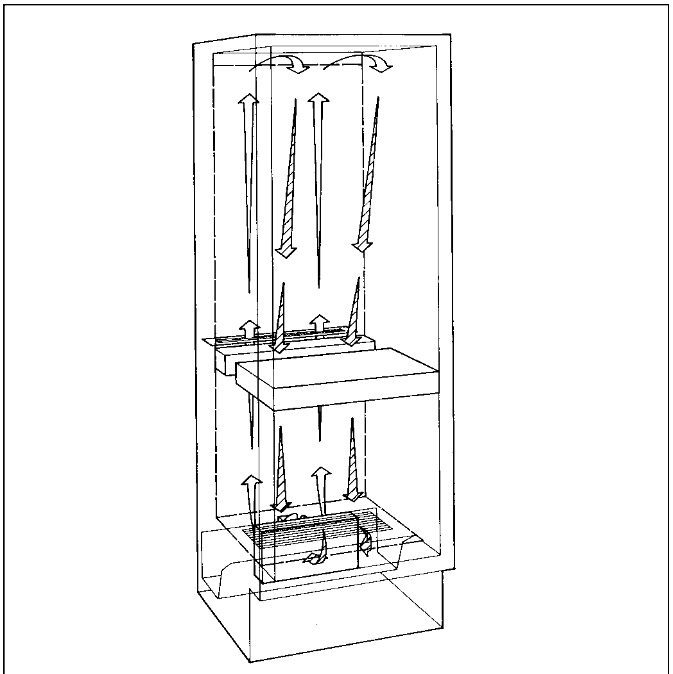


Figure 3-3. Model 700TF/I Air Flow

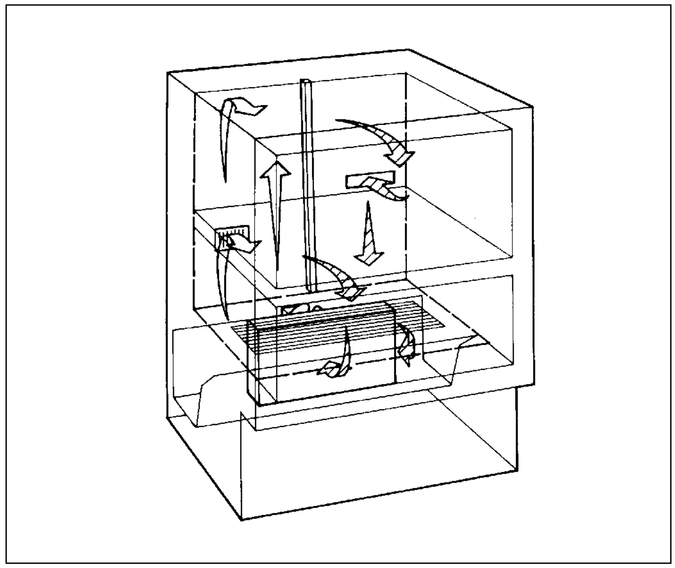


Figure 3-4. Model 700BR Air Flow

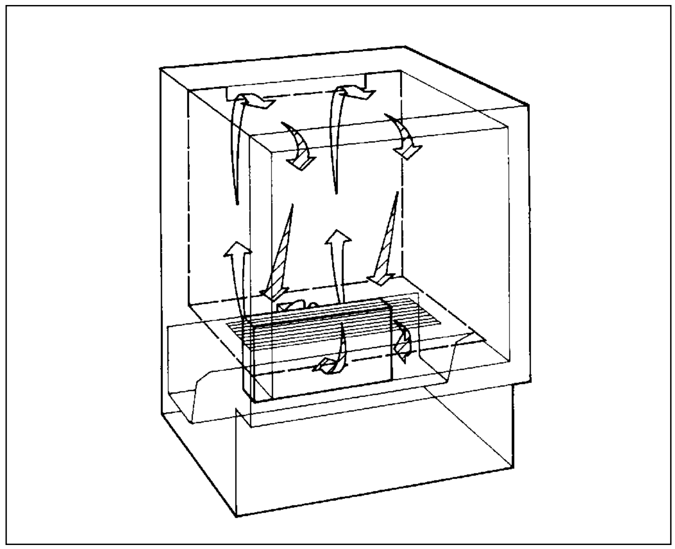


Figure 3-5. Model 700BF/I Air Flow

refrigerator compartment and is forced out at the top. Air then returns through an opening at the bottom right hand corner of the top duct, back down behind the right side of the lower air duct, to the evaporator sump area.

Air to the *lower freezer zone* travels up behind the center of the lower air duct, between the two vertical duct dividers. Air is then forced out at the top of the freezer compartment and returns to the evaporator sump area through the vents in the evaporator cover.

Model 700TF/I (Figure 3-3)

Air travels up behind the lower air duct and then behind the upper air duct where it is forced out at the top in the *upper freezer zone*. The air drops to the *lower freezer zone* through the mullion wall vent between the upper and lower compartments. Then the air returns to the evaporator sump area through the vents in the evaporator cover.

Model 700BR (Figure 3-4)

Air to the upper drawer zone travels up behind the left hand side of the rear duct and is forced out at the top. Air is then returned to the sump area, through the opening at the bottom right of the upper drawer zone.

Air to the lower drawer zone travels up behind the left hand side of the rear duct where the air baffle opens and closes as needed. The air then returns to the sump area through the evaporator cover.

Model 700BF/I (Figure 3-5)

Air travels up behind the air duct and is then forced out at the top of the *freezer zone*. The air then returns to the evaporator sump area through the vents in the evaporator cover.

NOTES

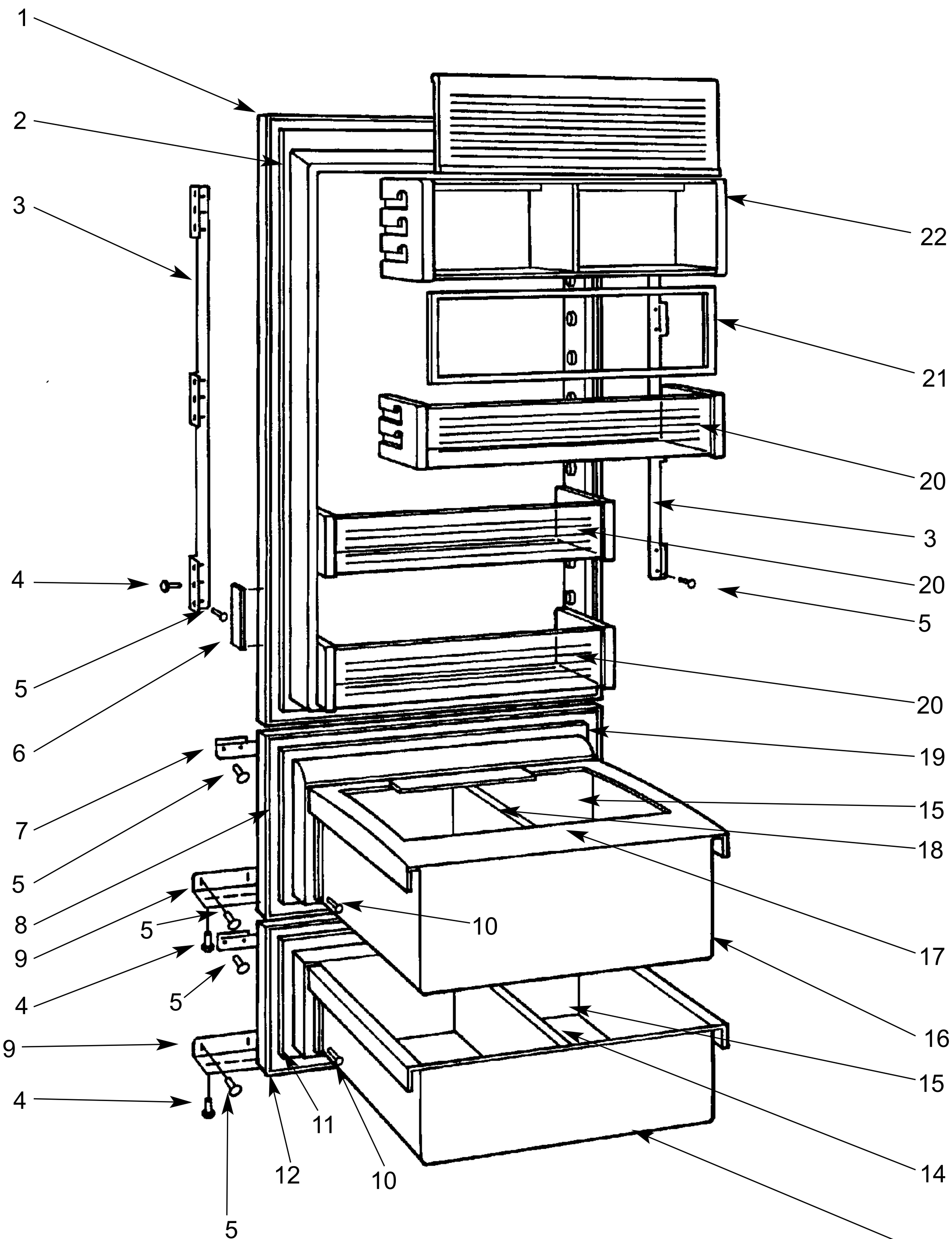
SECTION 4

PARTS LISTS
&
EXPLODED VIEWS

700TR DOOR VIEW

1.	4202011	Door Assembly, RH
	4202012	Door Assembly, LH
2.	3211510	Door Gasket
3.	0183610	Door Panel Bracket-Handle Side
	0183600	Door Panel Bracket-Hinge Side
4.	6200780	Screw, #10-24 x ½ PH Hex Washer
5.	6200720	Screw, #8-18 x 1/2 PH Truss HD
6.	3421490	Door Panel Bracket Screw Cover
7.	0183580	Drawer Panel Bracket-Upper
8.	3211520	Upper Drawer Gasket
9.	0183590	Drawer Panel Bracket-Lower
10.	6200110	Screw, #10-12 x 5/8 Truss SS
11.	3211540	Lower Drawer Gasket
12.	4131740	Lower Drawer Front Assy.
13.	4131780	Lower Drawer Tub
14.	3601350	Lower Drawer Divider
15.	4202020	Drawer Tub Seal
16.	4131760	Upper Drawer Tub
17.	3470320	Crisper Lid Assy.
18.	3601340	Upper Drawer Divider
19.	4131710	Upper Drawer Front Assy.
20.	4181270	Door Shelf Assembly
21.	3211550	Dairy Compartment Seal
22.	4181260	Dairy Compartment Assy.

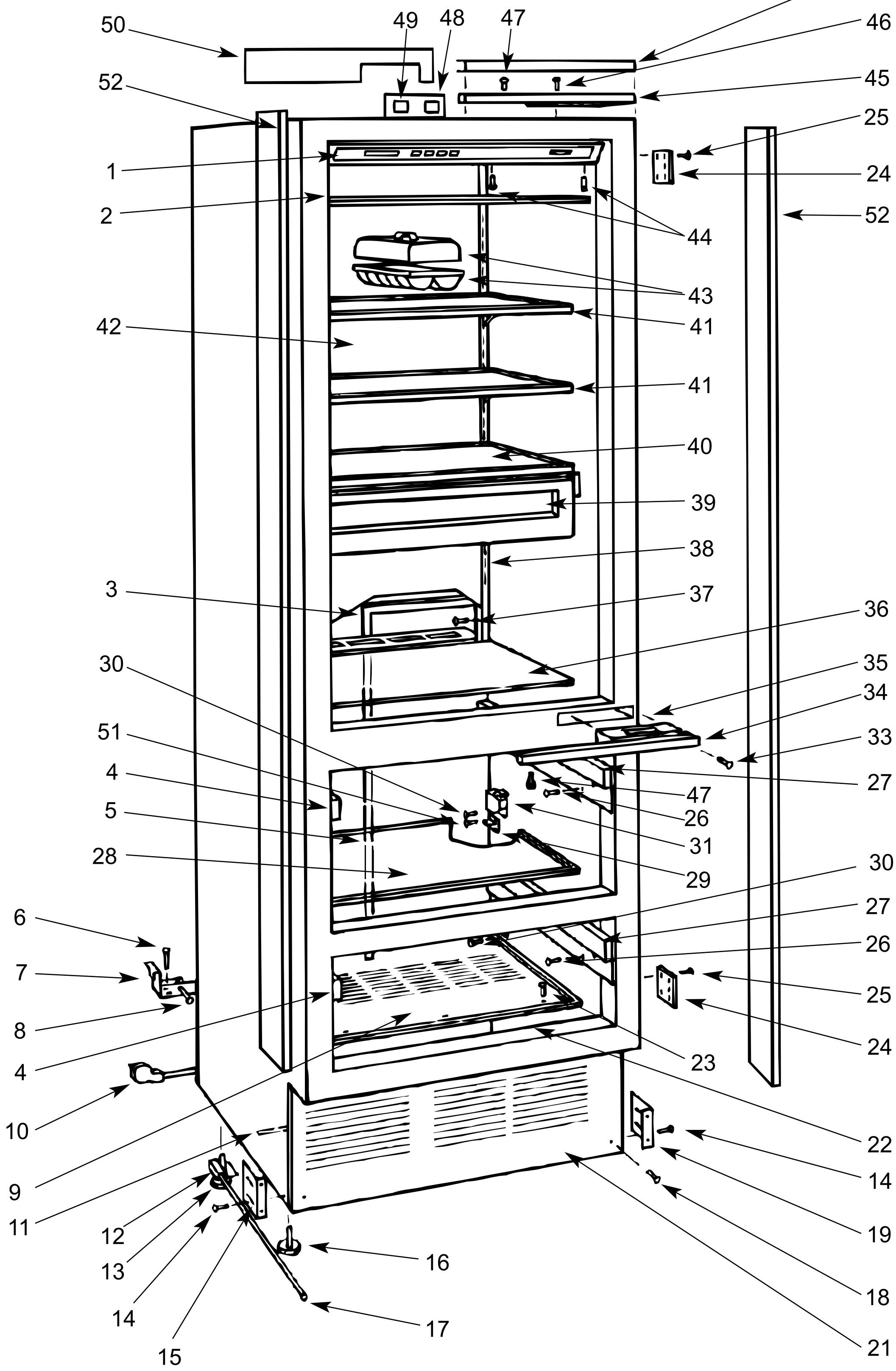
700TR DOOR VIEW



700TR DOOR VIEW

1.	4202100	Upper Control Panel Assy.
2.	4202100	Light Diffuser
3.	3211590	Duct Divider-Top L Shape
4.	3412032	Drawer Slide-Left Side
	1228600	Drawer Mount Extrusion
5.	3211600	Duct Divider - Vertical
6.	6110620	Wedge Anchor, 3/8-16 x 3-3/4
7.	0167550	Anti-Tip Bracket
8.	6201190	Screw, #12 x 2½ PH Pan Hd
9.	0167640	Evaporator Sump Cover
10.	4323540	Power Cord
11.	4323540	Power Cord Retractor
12.	4202000	Leveler Assembly
13.	3570070	Leveler Bolt, Rear
14.	6200780	Screw, #10-24 x ½ PH Hex
15.	0167662	Kickplate Bracket, Left Side
16.	3570060	Leveler Bolt, Front
17.	3421500	Leveler Rod
18.	6200050	Screw, #10-12 x ½ Pan HD
19.	0167661	Kickplate Bracket, Right Side
21.	3530430	Kickplate
22.	3211491	Sump Cover Seal, Right Side
	3211492	Sump Cover Seal, Left Side
	3211493	Sump Cover Seal, Rear
23.	6200080	Screw, #8-15 x ½ Truss HD
24.	3421510	Bracket, Unit to Cabinet
	3421460	Bracket, Unit to Unit
25.	6200720	Screw #8-18 x ½ PH Truss HD
26.	6201140	Screw, #1/4 20 x ½ Sems
27.	3412031	Drawer Slide, Right Side
	1228600	Drawer Mount Extrusion
28.	4151550	Lower Mullion Divider Assy.
29.	3412220	Divider Support
30.	6200110	Screw, #10-12 x 5/8 Truss HD
31.	3541020	Drawer Closer
32.	4151580	Lower Air Duct Assy.
33.	6201140	Screw, #1/4-20 x ½ Sem
34.	3541050	Hinge Cover
35.	3541041	Lower Hinge Assy., RH
	3541042	Lower Hinge Assy., LH
36.	4181320	Lower Glass Tray
37.	6200710	Screw, #8-18 x ½ PH SS
38.	3601411	Shelf Ladder, Right Side
	3601412	Shelf Ladder, Left Side
39.	4181300	Roll-Out Deli Basket, 4”
40.	4181291	Roll-Out Deli Shelf Assy., RH
	4181292	Roll-Out Deli Shelf Assy., LH
41.	3601390	Glass Shelf Assembly
42.	4151600	Upper Air Duct Assy.
43.	3412270	Egg Tray
	3412280	Egg Tray Cover
	4131810	Egg Tray w/Cover
44.	6200700	Screw, #6-20 x 5/8 PH FL HD
45.	3541031	Upper Hinge Assy., RH
	3541032	Upper Hinge Assy., LH
46.	6200780	Screw, #10-24 x ½ PH Hex
47.	6110610	Screw, #10-24 x 3/4 FL Socket
48.	0167580	Top Molding Bracket
49.	3450760	Dual Lock Fastener
50.	3516001	Top Molding - RH
	3516002	Top Molding - LH
51.	6200080	Screw, #8-15 x ½ Truss Hd.
52.	3516010	Side Molding
---	3580170	Nameplate (not shown)

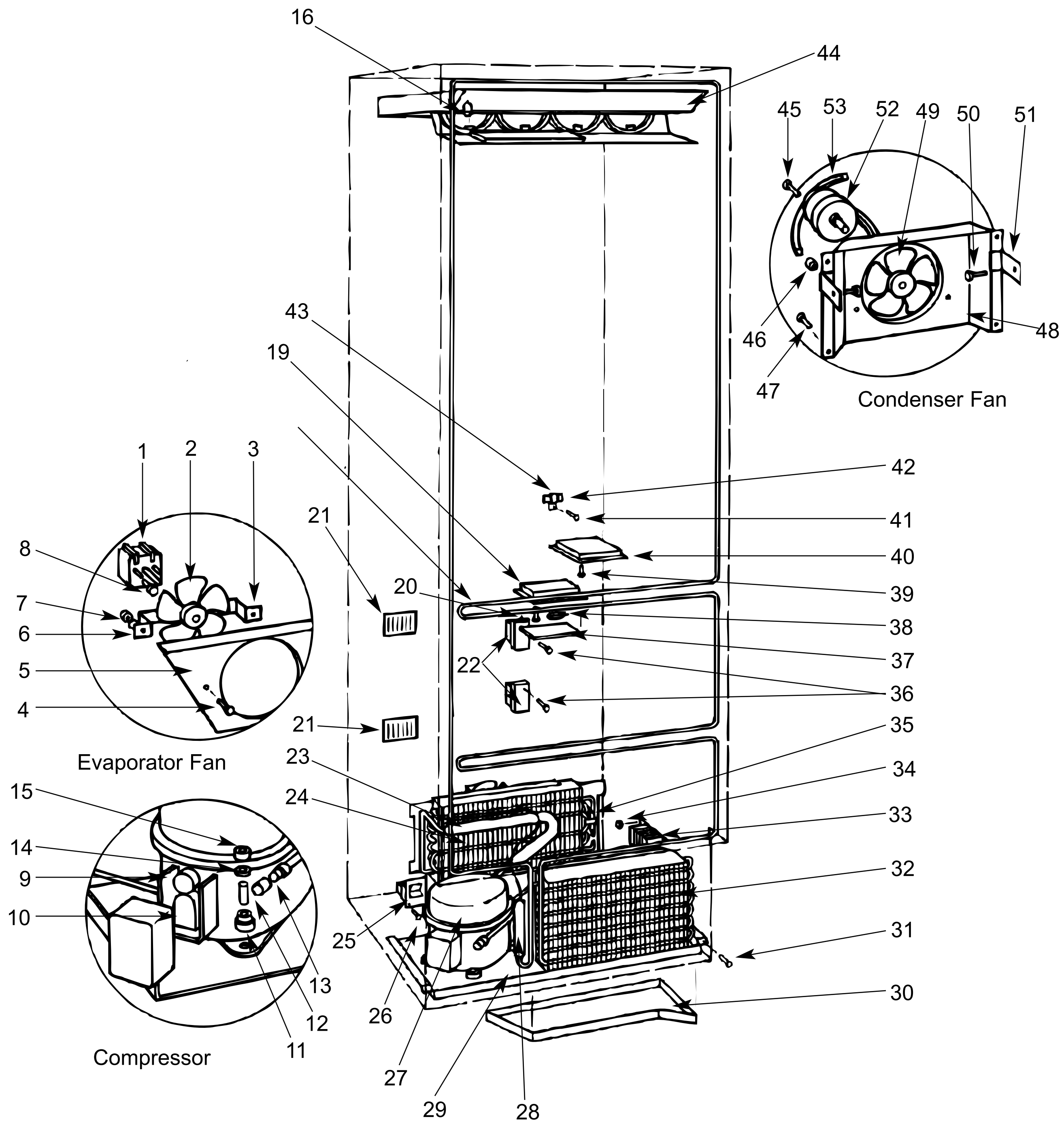
700TR COSMETIC VIEW



700TR SYSTEM VIEW

1.	4201940	Evaporator Fan Motor Assy.
2.	4201940	Evaporator Fan Blade
3.	0235500	Evaporator Fan Bracket
4.	6110020	Screw Grommet
5.	4201940	Evaporator Fan Shroud
6.	6240060	Star Washer, 1/4
7.	6150030	Nut, #10-24 Hex SS
8.	6110270	Bolt, #10-32 x 1/4 RD HD
9.	3111410	Overload
10.	3111370	Relay
11.	3150170	Grommet
12.	6160070	Sleeve
13.	6240050	Washer, 5/16
14.	3090090	Schrader Valve
15.	6150220	Nut, 5/16-18 Hex Zinc
16.	3030100	Halogen Lamp, 35W
19.	4201980	Drawer Light Fixture Assy.
20.	6200080	Screw, #8 x ½ Truss HD
21.	3014140	Baffle Control
	3211440	Baffle Control Gasket
22.	4202580	Reed Switch, Short
23.	4201890	Evaporator/Heat Exchanger Assy.
24.	4201890	Evaporator/Heat Exchanger Assy.
25.	3060240	Master Power Switch
26.	6200780	Screw, #10-24 x ½ PH Hex
27.	4201880	Compressor Assembly
28.	3014230	Drier
29.	0140340	Unit Sliding Tray
30.	0167450	Drain Pan
31.	6200780	Screw, #10-24 x ½ PH Hex
32.	3120310	Condenser Coil
33.	3090170	Transformer
34.	6150790	Nut, #10-24 Sems
35.	4323800	Coil Sensor/Thermistor Assy.
36.	6200280	Screw, #8-18 x 1 Pan HD
37.	3500410	Light Lens
38.	3030090	Halogen Lamp, 20W
39.	6201120	Screw, #8-18 x 1.75 Truss SS
40.	4201991	Micro-Processor Assy.
41.	6200120	Screw, #10-12 x ½ Truss HD
42.	4323800	Coil Sensor/Thermistor Assy.
43.	6120070	Clamp
44.	4202100	Upper Control Panel Assy.
45.	6200490	Screw, #8-32 x 3/8 Hex Slot
46.	3220360	Condenser Fan Brkt Grommet
47.	6200060	Screw, #8-32 x ½ Pan HD
48.	0167440	Condenser Fan Shroud
49.	3150320	Condenser Fan Blade
50.	6200010	Screw, #10-12 x 3/4 Pan HD
51.	3450290	Angle Brackets
52.	3150500	Condenser Fan Motor
53.	0167430	Condenser Fan Bracket

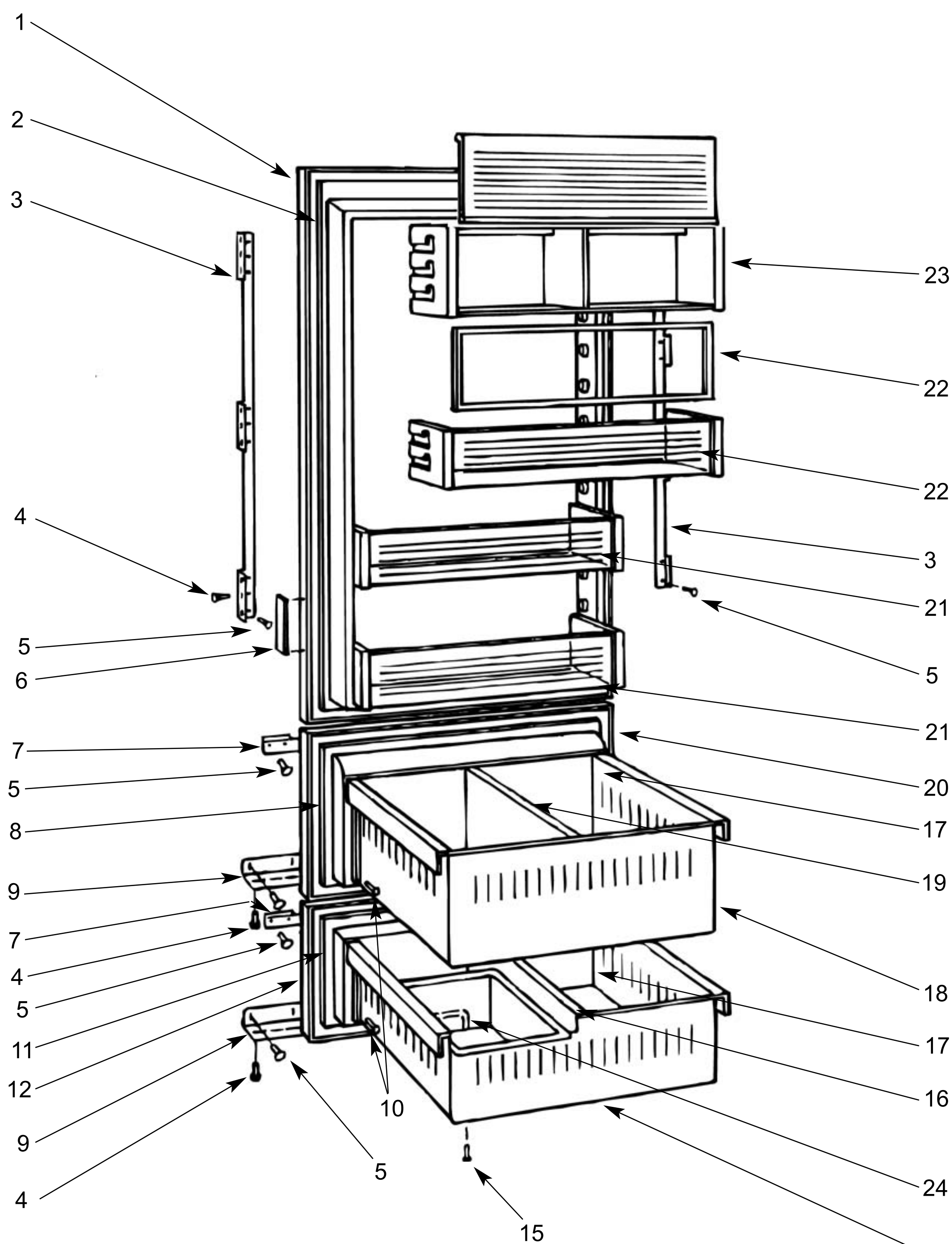
700TR SYSTEM VIEW



700TC/I DOOR VIEW

1.	4202011	Door Assembly, RH
	4202012	Door Assembly, LH
2.	3211510	Door Gasket
3.	0183600	Door Panel Bracket-Hinge Side
	0183610	Door Panel Bracket-Handle Side
4.	6200780	Screw, #10-24 x ½ PH Hex Washer
5.	6200720	Screw, #8-18 x ½ PH Truss HD
6.	3421490	Door Panel Bracket Screw Cover
7.	0183580	Drawer Panel Bracket-Upper
8.	3211520	Upper Drawer Gasket
9.	0183590	Drawer Panel Bracket-Lower
10.	6200110	Screw, #10-12 x 5/8 Truss SS
11.	3211540	Lower Drawer Gasket
12.	4131750	Lower Drawer Front Assy.
13.	4181340	Ice Bucket Assembly
14.	4131800	Lower Drawer Tub
15.	6200080	Screw, #8-15 x ½ Truss HD
16.	3601420	Lower Drawer Divider
17.	4202020	Drawer Tub Seal
18.	4131770	Upper Drawer Tub
19.	3601340	Upper Drawer Divider
20.	4131720	Upper Drawer Front Assy.
21.	4181270	Door Shelf Assembly
22.	3211550	Dairy Compartment Seal
23.	4181260	Dairy Compartment Assy.
24.	3511040	Plastic 3" Wire Pull

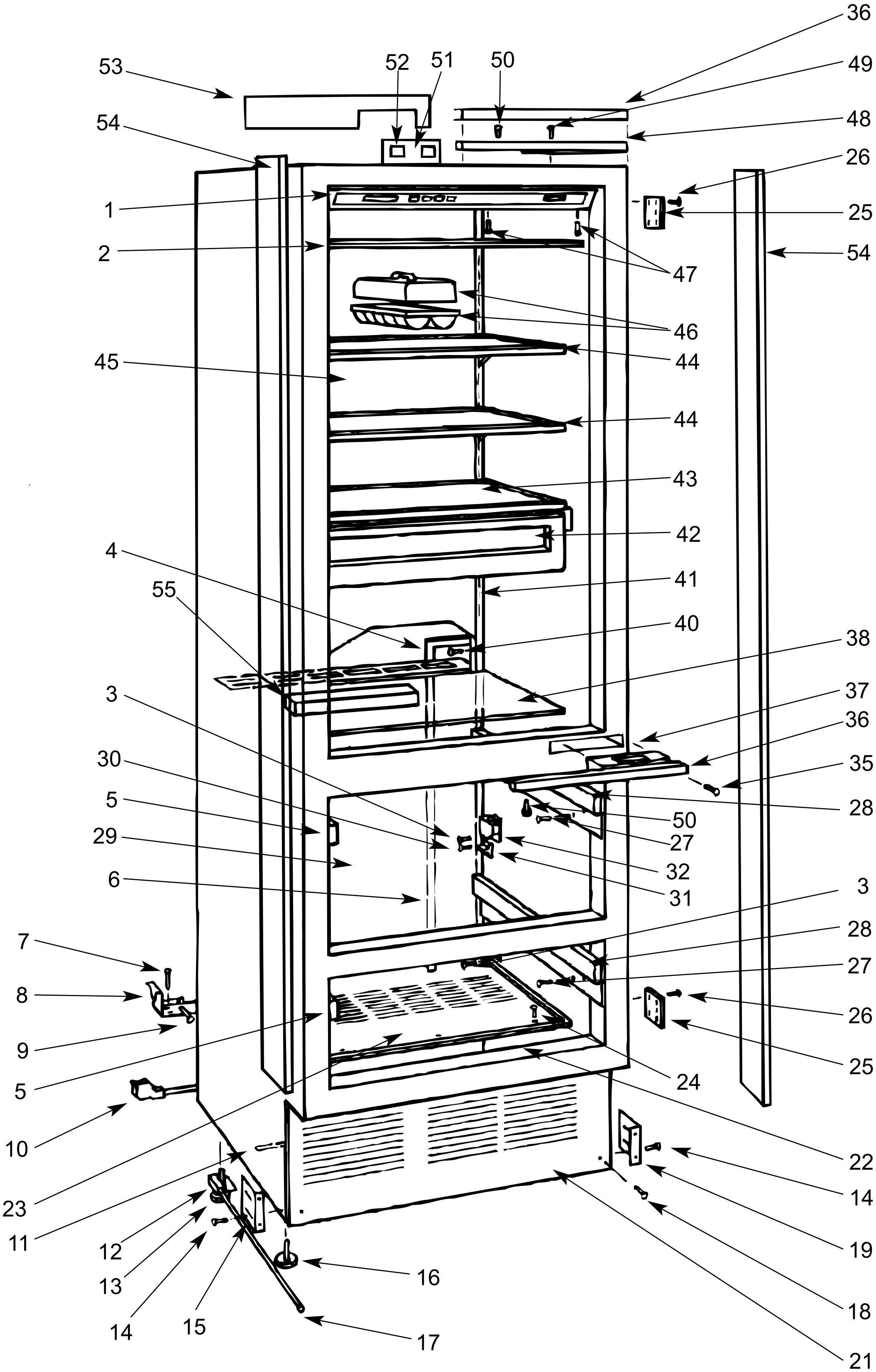
700TC/I DOOR VIEW



700TC/I COSMETIC VIEW

1.	4202100	Upper Control Panel Assy.
2.	4202100	Light Diffuser
3.	6200110	Screw, #10-12 x 5/8 Truss Hd.
4.	3211590	Duct Divider, Top L Shape
5.	3412032	Drawer Slide, Left Side
	1228600	Drawer Mount Extrusion
6.	3211600	Duct Divider, Vertical
7.	6110620	Wedge Anchor 3/8-16 x 3-3/4
8.	0167550	Anti-Tip Bracket
9.	6201190	Screw, #12 x 2½ PH Pan HD.
10.	4323540	Power Cord
11.	4323540	Power Cord Retractor
12.	4202000	Rear Leveler Assembly
13.	3570070	Leveler Bolt, Rear
14.	6200780	Screw, #10-24 x ½ PH Hex
15.	0167662	Kickplate Bracket, Left Side
16.	3570060	Leveler Bolt, Front
17.	3421500	Leveler Rod
18.	6200050	Screw, #10-12 x ½ Pan HD.
19.	0167661	Kickplate Bracket, Right Side
20.	6200780	Screw, #10-24 x ½ PH Hex
21.	3530430	Kickplate
22.	3211491	Sump Cover Seal, Right Side
	3211492	Sump Cover Seal, Left Side
	3211493	Sump Cover Seal, Rear
23.	0167470	Evaporator Sump Cover
24.	6200080	Screw, #8-15 x ½ Truss HD.
25.	3421510	Bracket, Unit to Cabinet
	3421460	Bracket, Unit to Unit
26.	6200720	Screw, #8-18 x ½ PH Truss HD.
27.	6201140	Screw, 1/4-20 x ½ Sems But HD.
28.	3412031	Drawer Slide, Right Side
	1228600	Drawer Mount Extrusion
29.	4151590	Lower Air Duct Assy.
30.	6200080	Screw, #8-15 x ½ Truss Hd.
31.	3412220	Divider Support
32.	3541020	Drawer Closer
35.	6201140	Screw, 1/4-20 x ½ Sems
36.	3541050	Hinge Cover
37.	3541041	Lower Hinge Assy., RH Swing
	3541042	Lower Hinge Assy., LH Swing
38.	4181330	Lower Glass Tray
39.	3150580	Duct Foam
40.	6200710	Screw,#8-18 x ½ PH SS
41.	3601411	Shelf Ladder, Right Side
	3601412	Shelf Ladder, Left Side
42.	4181280	Roll-Out Crisper Drawer, 8"
43.	4181311	Roll-Out Crisper Shelf Assy., RH
	4181312	Roll-Out Crisper Shelf Assy., LH
44.	3601390	Glass Shelf Assy.
45.	4151600	Upper Air Duct Assy.
46.	3412270	Egg Tray
	3412280	Egg Tray Cover
	4131810	Egg Tray w/Cover
47.	6200700	Screw, #6-20 x 5/8 PH FL HD.
48.	3541031	Upper Hinge Assy., RH Swing
	3541032	Upper Hinge Assy., LH Swing
49.	6200780	Screw, #10-24 x ½ PH Hex
50.	6110610	Screw, #10-24 x 3/4 Fl Socket
51.	0167580	Top Molding Bracket
52.	3450760	Dual Lock Fastener
53.	3516001	Top Molding - RH
	3516002	Top Molding - LH
54.	3516010	Side Molding
55.	3211580	Transition Duct Block
---	3580170	Nameplate (not shown)

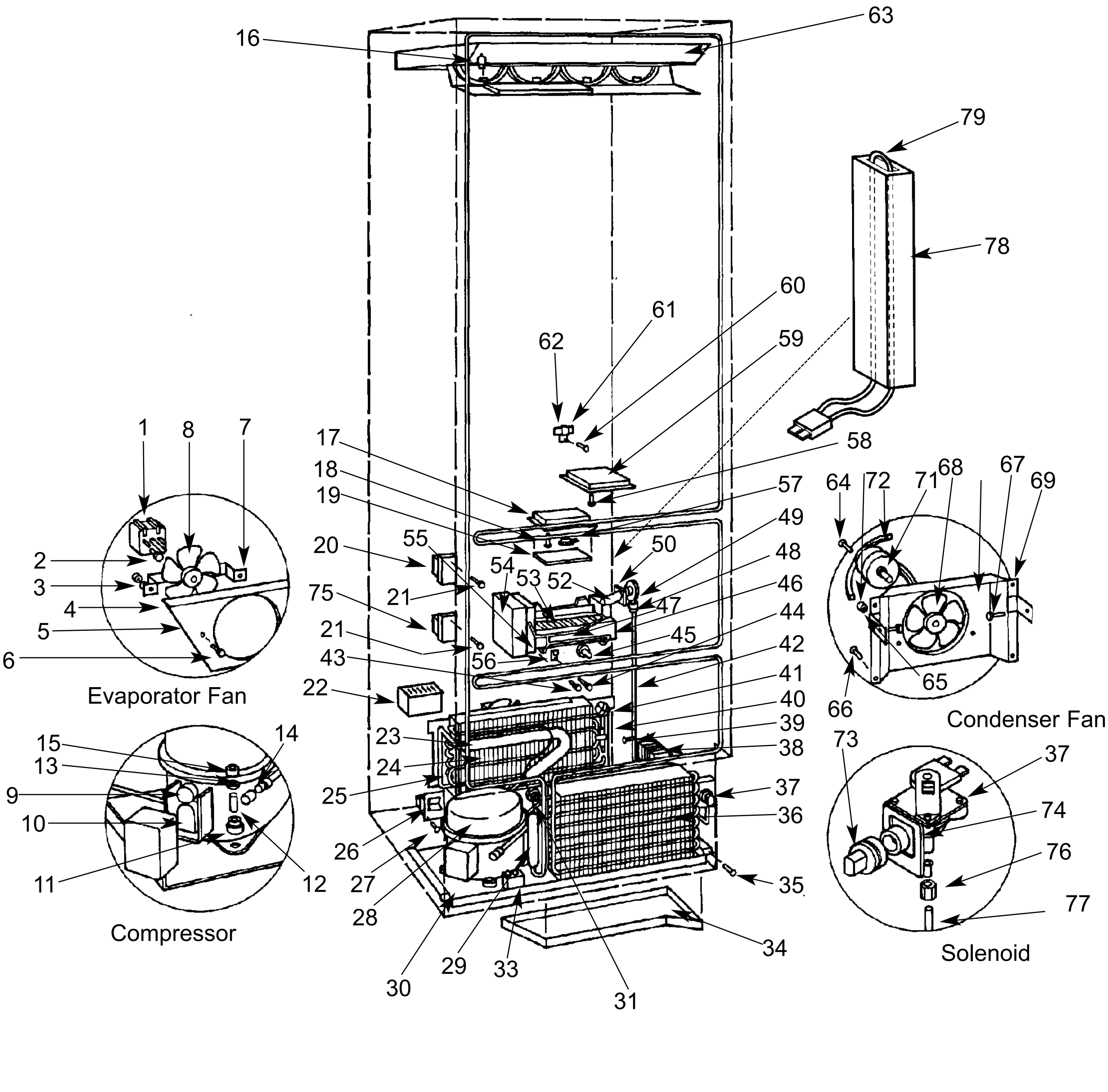
700TC/I COSMETIC VIEW



700TC/I SYSTEM VIEW

1.	4201940	Evaporator Fan Motor Assy.
2.	6110270	Bolt #10-32 X 1/4 RD HD
3.	6150030	Nut, #10-24 Hex SS
4.	6240060	Star Washer, 1/4
5.	4201940	Evaporator Fan Shroud
6.	6110020	Bolt, #10-24 x 3/8 Truss HD
7.	0233500	Evaporator Fan Bracket
8.	4201940	Evaporator Fan Blade
9.	3111380	Overload
10.	3111350	Relay
11.	3150170	Rubber Grommet
12.	6160070	Sleeve
13.	6240050	Washer, 5/16
14.	3090090	Schrader Valve
15.	6150220	Nut, 5/16-18 Hex Zinc
16.	3030100	Halogen Lamp, 35W
17.	4201980	Drawer Light Fixture Assy.
18.	6200080	Screw, #8 x ½ Truss HD
19.	3500410	Light Lens
20.	4202580	Reed Switch, Short
21.	6200280	Screw, #8-18 x 1 Pan HD
22.	4151790	Baffle Mount Assembly
23.	4201900	Evaporator /Heat Exchanger Assy.
24.	4201900	Evaporator /Heat Exchanger Assy.
25.	4201970	Defrost Heater Assy.
26.	3060240	Mater Power Switch
27.	6200780	Screw, #10-24 x ½ PH Hex
28.	4201860	Compressor Assembly
29.	3014230	Drier
30.	0140340	Unit Sliding Tray
31.	3013540	Drain Tube Heater
33.	3111270	Capacitor
	0167620	Capacitor Mounting Bracket
34.	0167450	Drain Pan
35.	6200780	Screw, #10-24 x ½ PH Hex
36.	3120310	Condenser Coil
37.	4201450	Solenoid Valve
38.	3090170	Transformer
39.	6150790	Nut, #10-24 Sems
40.	4323800	Coil Sensor/Thermistor Assy.
41.	3082090	Defrost Terminator
42.	2600617	Water Line
43.	6201120	Screw, #8-18 x 1.75 Truss SS
44.	6200080	Screw, #8-15 x ½ Truss HD
45.	3060130	Icemaker Switch
46.	3140280	Icemaker Control Arm
47.	3140200	Icemaker Shut-Off Arm
48.	628356	Bearing & Inlet
49.	6220470	Fill Tube Clamp
50.	1607600	Water Inlet Tube
51.	3013820	Fill Tube Heater
52.	2605405	Fill Tube Extension
53.	6201120	Screw, #8-18 x 1.75 Truss SS
54.	4202090	Complete Icemaker Assy.
	3140160	Icemaker Cover
	628366	Motor Modular Assy.
55.	3421070	Icemaker Connecting Rod
56.	6220220	Screw Grommet
57.	3030090	Halogen Lamp, 20W
58.	6201130	Screw, #8 x ½ PH FL HD SS
59.	4201992	Micro-Processor Assy.
60.	6200120	Screw, #10-12 x ½ Truss HD
61.	4323800	Coil Sensor/Thermistor Assy.
62.	6120070	Clamp
63.	4202100	Upper Control Panel Assy.
64.	6200490	Screw, #8-32 x 3/8 Hex Slot
65.	3220360	Condenser Fan Brckt Grommet
66.	6200060	Screw, #8-32 x ½ Pan HD
67.	6200010	Screw, #10-12 x 3/4 Pan HD
68.	3150320	Condenser Fan Blade
69.	3450290	Angle Bracket
70.	0167440	Condenser Fan Shroud
71.	3150500	Condenser Fan Motor
72.	0167430	Condenser Fan Bracket
73.	3520350	Water Inlet Fitting Assy.
74.	0166200	Solenoid Retainer
	6200780	Screw, #10-24½ PH Hex
75.	4202570	Reed Switch, Long
76.	3520050	Brass Insert
77.	3520030	Nylon Nut
78.	3150580	Foam Duct
79.	3013550	Braided Wire Heater

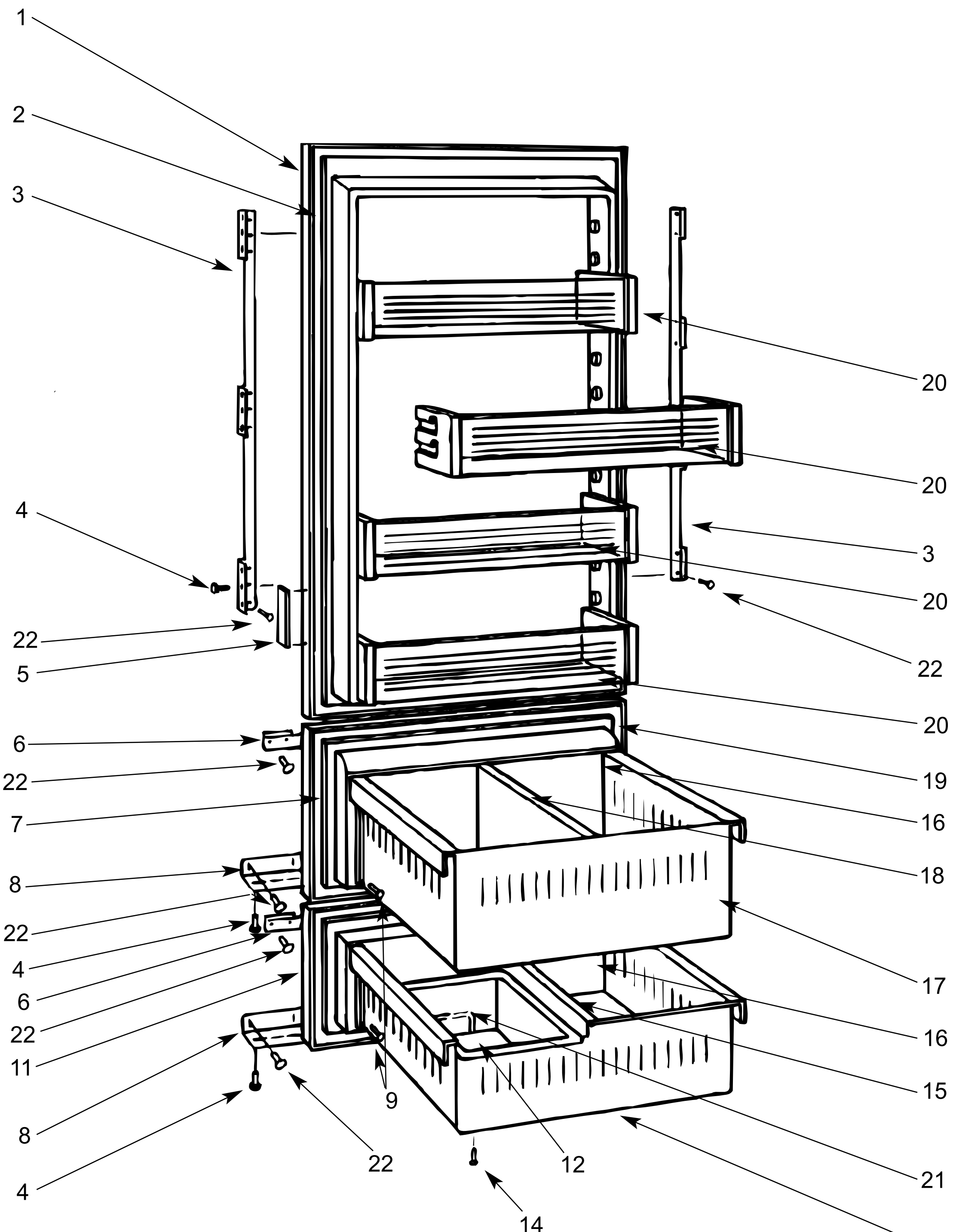
700TC/I SYSTEM VIEW



700TF/I DOOR VIEW

1. 4202011 Door Assembly, RH
   4202012 Door Assembly, LH
2. 3211510 Door Gasket
3. 0183600 Door Panel Bracket-Hinge Side
   0183610 Door Panel Bracket-Handle Side
4. 6200780 Screw, #10-24 x ½ PH Hex Washer
5. 3421490 Door Panel Bracket Screw Cover
6. 0183580 Drawer Panel Bracket-Upper
7. 3211520 Upper Drawer Gasket
8. 0183590 Drawer Panel Bracket-Lower
9. 6200110 Screw, #10-12 x 5/8 Truss SS
10. 3211540 Lower Drawer Gasket
11. 4131750 Lower Drawer Front Assy.
12. 4181340 Ice Bucket Assembly
13. 4131800 Lower Drawer Tub
14. 6200080 Screw, #8-15 x ½ Truss HD
15. 3601420 Lower Drawer Divider
16. 4202020 Drawer Tub Seal
17. 4131770 Upper Drawer Tub
18. 3601340 Upper Drawer Divider
19. 4131720 Upper Drawer Front Assy.
20. 4181270 Door Shelf Assembly
21. 3511040 Plastic 3" Wire Pull
22. 6200720 Screw, #8-18 x ½ PH Truss HD

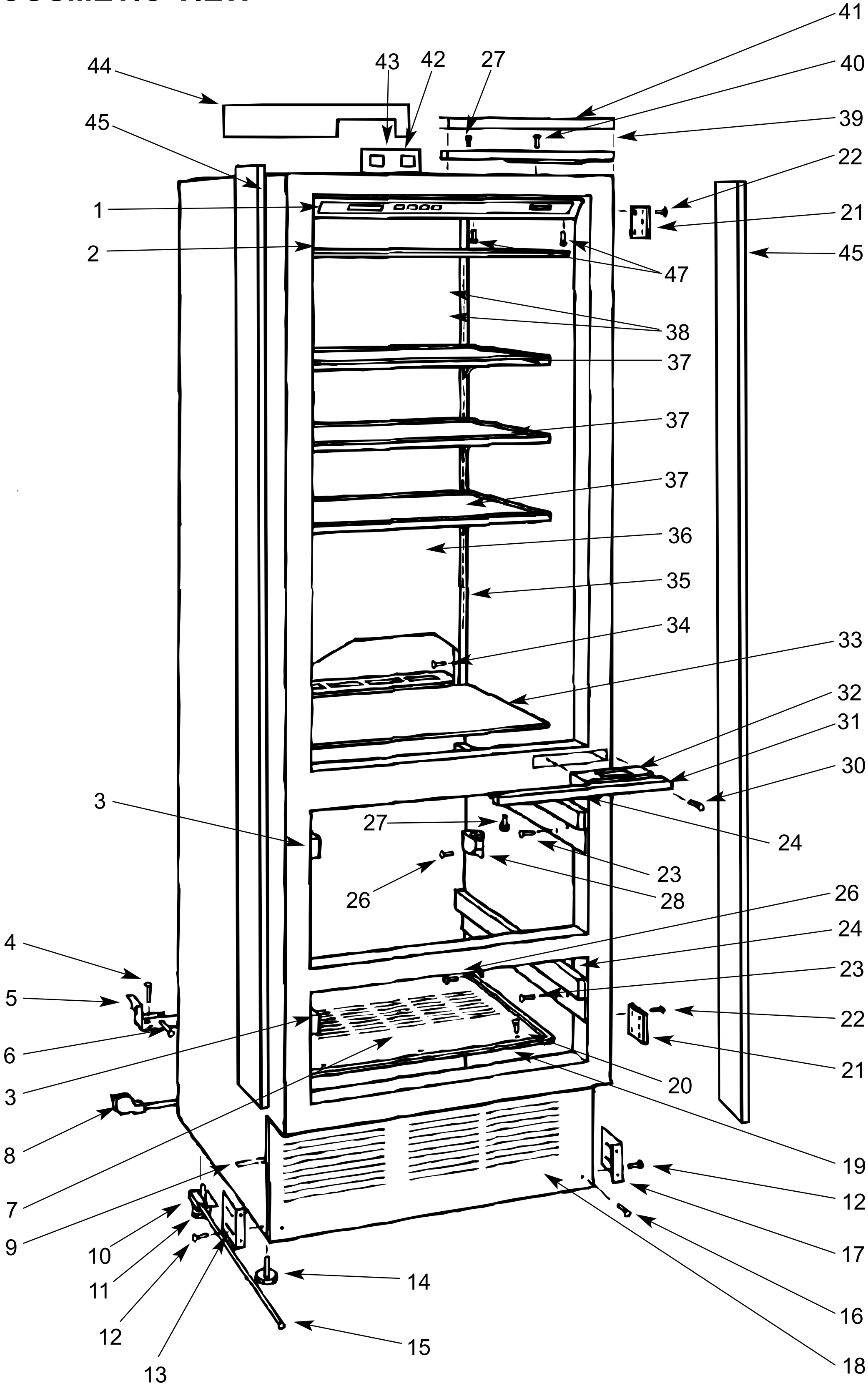
700TF/I DOOR VIEW



700TF/I COSMETIC VIEW

1.	4202100	Upper Control Panel Assy.
2.	4202100	Light Diffuser
3.	3412032	Drawer Slide, Left Side
	1228600	Drawer Mount Extrusion
4.	6110620	Wedge Anchor, 3/8-16 x 3 3/4
5.	0167550	Anti-Tip Bracket
6.	6201190	Screw, #12 x 2 ½ PH Pan HD
7.	0167470	Evaporator Sump Cover
8.	4323540	Power Cord
9.	4323540	Power Cord Retractor
10.	4202000	Leveler Assy.
11.	3570070	Leveler Bolt, Rear
12.	6200780	Screw, #10-24 x ½ PH Hex
13.	0167662	Kickplate Bracket, Left Side
14.	3570060	Leveler Bolt, Front
15.	3421500	Leveler Rod
16.	6200050	Screw, #10-12 x ½ Pan HD
17.	0167661	Kickplate Bracket, RS
18.	3530430	Kickplate
19.	3211491	Sump Cover Seal, RS
	3211492	Sump Cover Seal, Left Side
	3211493	Sump Cover Seal, Rear
20.	6200080	Screw, #8-15 x ½ Truss HD
21.	3421510	Bracket, Unit to Cabinet
	3421460	Bracket, Unit to Unit
22.	6200720	Screw, #8-18 x ½ PH Truss HD
23.	6201140	Screw, #1/4-20 x ½ Sems
24.	3412031	Drawer Slide, Right Side
	1228600	Drawer Mount Extrusion
25.	4151570	Lower Air Duct Assy.
26.	6200110	Screw, #10-12 x 5/8 Truss Hd.
27.	3110610	Screw, #10-24 x 3/4 Fl Socket
28.	3541020	Drawer Closer
30.	6201140	Screw, #1/4-20 x ½ Sems
31.	3541050	Hinge Cover
32.	3541041	Lower Hinge Assy., RH
	3541042	Lower Hinge Assy., LH
33.	4181330	Lower Glass Tray
34.	6200710	Screw, #8-18 x ½ PH SS
35.	3601411	Shelf Ladder, Right Side
	3601412	Shelf Ladder, Left Side
36.	4151610	Upper Air Duct Assy.
37.	3601390	Glass Shelf Assy.
38.	6200700	Screw, #6-20 x 5/8 PH FL HD
39.	3541031	Upper Hinge Assy., RH
	3541032	Upper Hinge Ass., LH
40.	6200780	Screw, #10-24 x ½ PH Hex
41.	3541050	Hinge Cover
42.	0167580	Top Molding Bracket
43.	3450760	Dual Lock Fastener
44.	3516001	Top Molding - RH
	3516002	Top Molding - LH
45.	3516010	Side Molding
---	3580170	Nameplate (not shown)

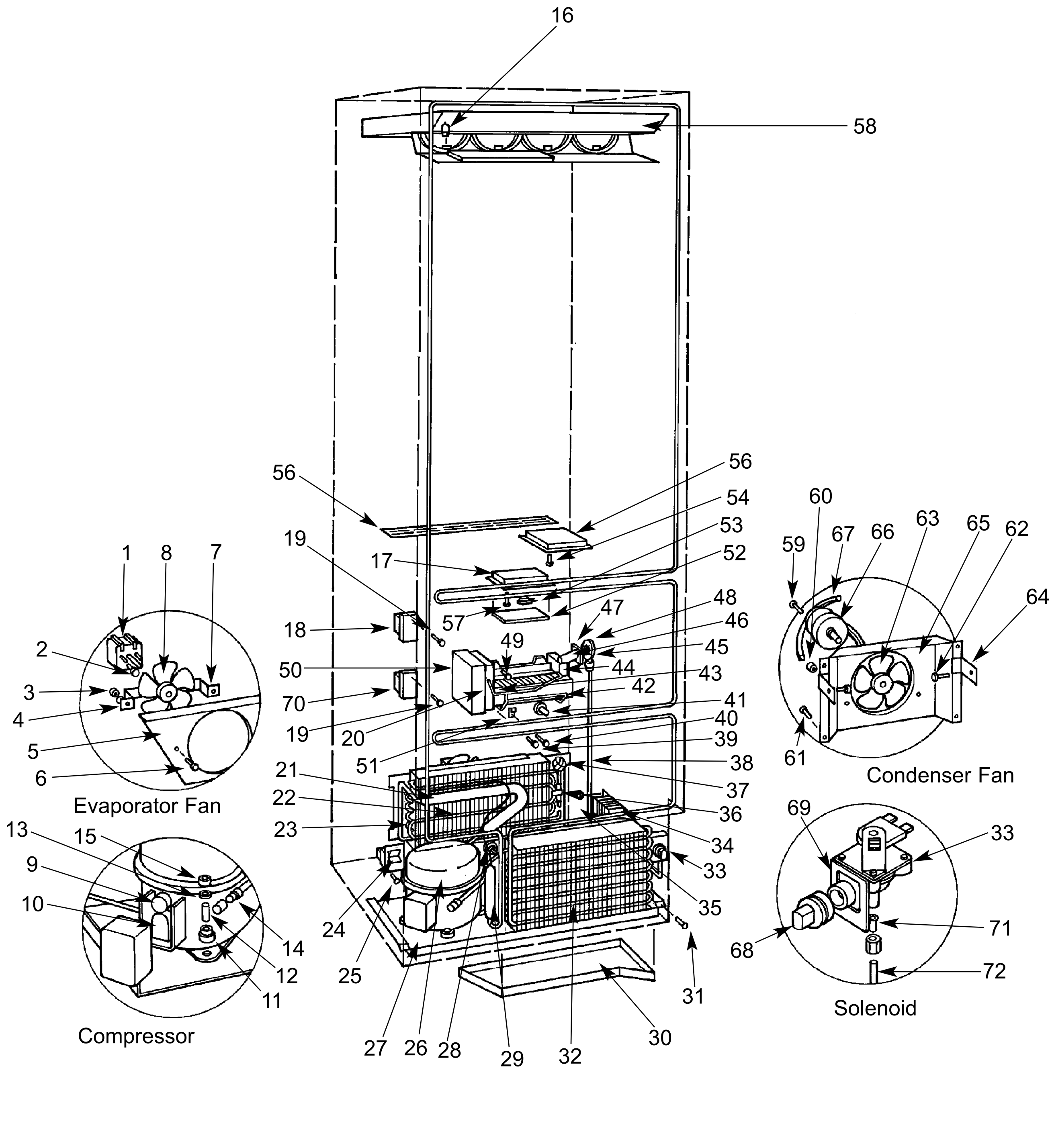
700TF/I COSMETIC VIEW



700TF/I SYSTEM VIEW

1.	4201940	Evaporator Fan Motor Assy.
2.	6110270	Bolt, #10-32 x 1/4 RD HD
3.	6150030	Nut, #10-24 Hex SS
4.	6240060	Star Washer, 1/4
5.	4201940	Evaporator Fan Shroud
6.	6110020	Bolt, #10-24 x 3/8 Truss HD
7.	0233500	Evaporator Fan Bracket
8.	4201940	Evaporator Fan Blade
9.	3111390	Overload
10.	3111350	Relay
11.	3150170	Grommet
12.	6160070	Sleeve
13.	6240050	Washer, 5/16
14.	3090090	Schrader Valve
15.	6150220	Nut, 5/16-18 Hex Zinc
16.	3030100	Halogen Lamp, 35W
17.	4201980	Drawer Light Fixture Assy.
18.	4202580	Reed Switch, Short
19.	6200780	Screw, #10-24 x ½ PH Hex
20.	3140200	Icemaker Shut-Off Arm
21.	4201910	Evaporator/Heat Exchanger Assy.
22.	4201910	Evaporator/Heat Exchanger Assy.
23.	4201970	Defrost Heater Assy.
24.	3060240	Master Power Switch
25.	6200780	Screw, #10-24 x ½ PH Hex
26.	4201870	Compressor Assy.
27.	0140340	Unit Sliding Tray
28.	3013540	Drain Tube Heater
29.	3014230	Drier
30.	0167450	Drain Pan
31.	6200780	Screw, #10-24 x ½ PH Hex
32.	4201910	Evaporator Assy.
33.	4201450	Solenoid Valve
34.	3090170	Transformer
35.	6150790	Nut, #10-24 Sems
36.	4323800	Coil Sensor/Thermistor Assy.
37.	3082090	Defrost Terminator
38.	2600617	Water Line
39.	6201120	Screw, #8-18 x 1.75 Truss SS
40.	6200080	Screw, #8-15 x ½ Truss HD
41.	3060130	Icemaker Switch
42.	3140280	Icemaker Control Arm
43.	3421070	Icemaker Connecting Rod
44.	628356	Bearing & Inlet
45.	6220470	Fill Tube Clamp
46.	2605405	Fill Tube Extension
47.	3013820	Fill Tube Heater
48.	1607600	Water Inlet Tube
49.	6201120	Screw, #8-18 x 1.75 Truss SS
50.	4202090	Complete Icemaker Assy.
	3140160	Icemaker Cover
	628366	Motor Modular Assy.
51.	6220220	Screw Grommet, 1/32 x 3/8 Square.
52.	3500410	Light Lens
53.	3030090	Halogen Lamp, 20W
54.	6201130	Screw, #8 x ½ PH FL HD SS
55.	4201993	Control Board Assy.
56.	3412370	Mullion Grille
57.	6200080	Screw, #8 x ½ Truss HD
58.	4202100	Upper Control Panel Assy.
59.	6200490	Screw, #8-32 x 3/8 Hex Slot
60.	3220360	Condenser Fan Brckt Grommet
61.	6200060	Screw, #8-32 x ½ Pan HD
62.	6200010	Screw, #10-12 x 3/4 Pan HD
63.	3150320	Condenser Fan Blade
64.	3450290	Angle Bracket
65.	0167440	Condenser Fan Shroud
66.	3150500	Condenser Fan Motor
67.	0167430	Condenser Fan Bracket
68.	3520350	Water Inlet Fitting Assy.
69.	0166200	Solenoid Retainer
	6200780	Screw, #10-24 x ½ PH Hex
70.	4202570	Reed Switch, Long
71.	3520050	Brass Insert
72.	3520030	Nylon Nut

700TF/I SYSTEM VIEW

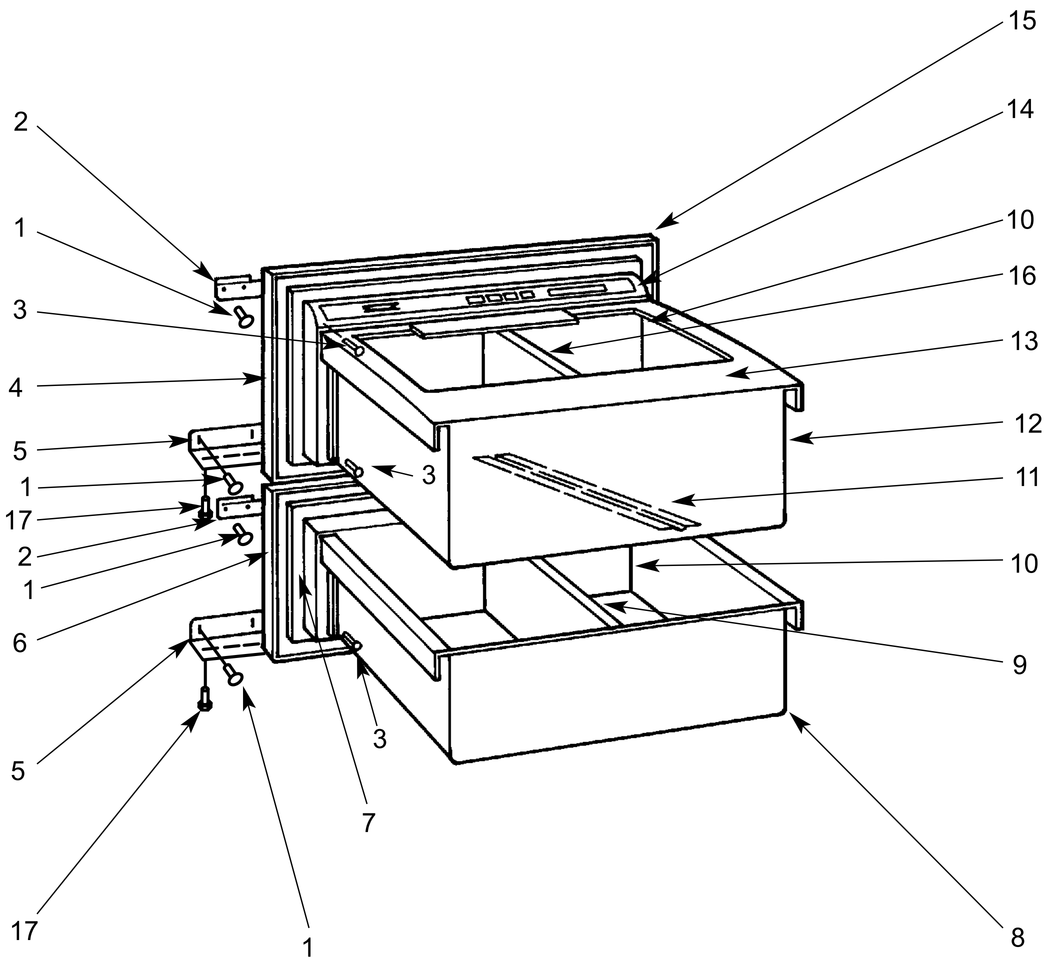


700TC/I System View

700BR DOOR VIEW

1. 6200720 Screw, #8-18 x ½ PH Truss Hd.
2. 0183580 Drawer Panel Bracket, Upper
3. 6200110 Screw, #10-12 x 5/8 Truss SS
4. 3211520 Upper Drawer Gasket
5. 0183590 Drawer Panel Bracket, Lower
6. 4131740 Lower Drawer Front Assy.
7. 3211540 Lower Drawer Gasket
8. 4131780 Lower Drawer Tub
9. 3601350 Lower Drawer Divider
10. 4202020 Drawer Tub Seal
11. 4202060 Upper Drawer Wire Channel
12. 4131760 Upper Drawer Tub
13. 3470320 Crisper Lid Assy.
14. 4202030 Drawer Control Panel Assy.
15. 4131730 Upper Drawer Front Assy.
16. 3601340 Upper Drawer Divider
17. 6200780 Screw, #10-24 x ½ PH Hex Washer

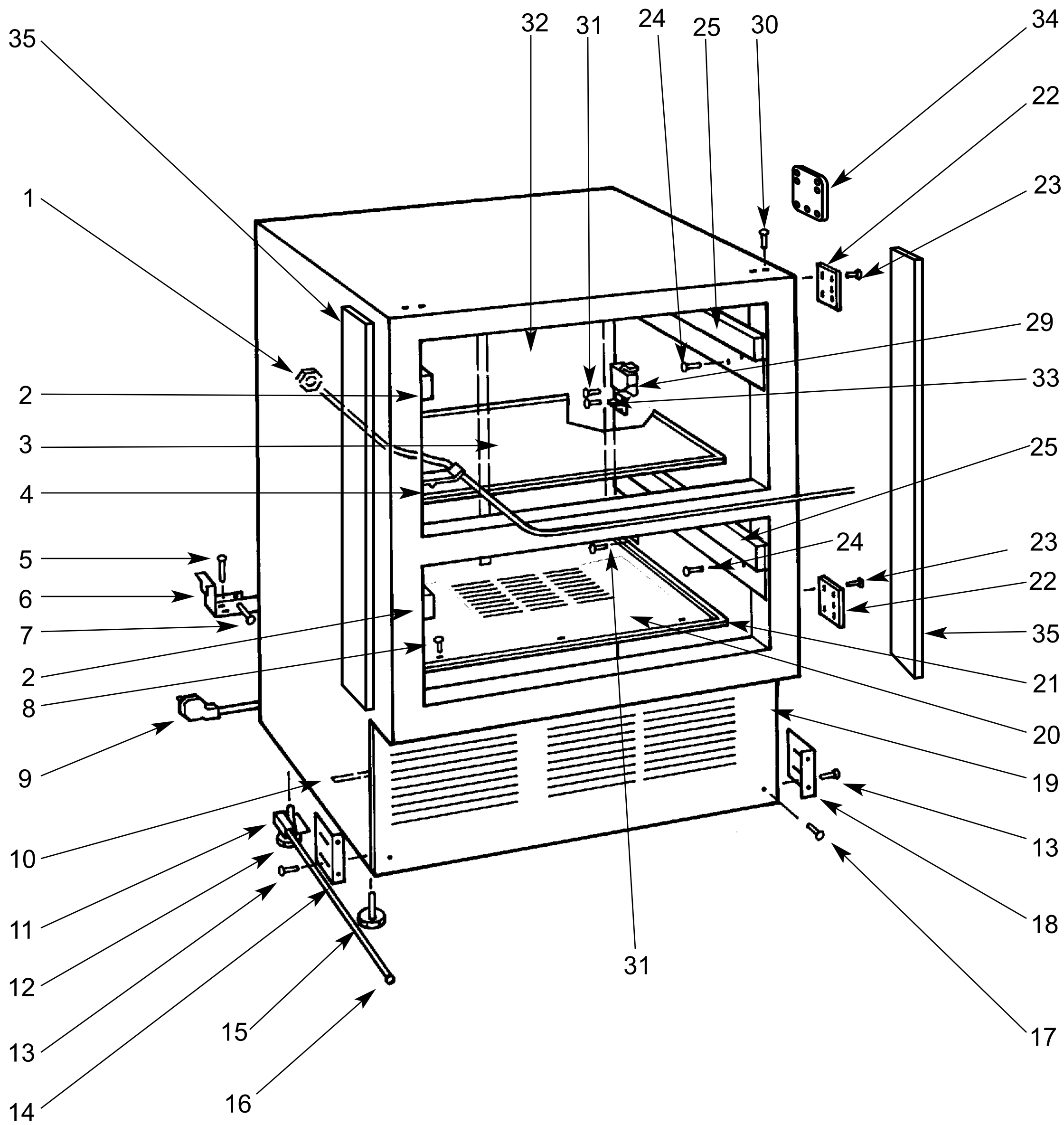
700BR DOOR VIEW



700BR COSMETIC VIEW

1.	6150800	Plastic Hex Nut, 5/8-27 UNS-2A
2.	3412032	Drawer Slide, Left Side
	1228600	Drawer Mount Extrusion
3.	4151560	Lower Mullion Divider Assy.
4.	3450780	Wire Clip
5.	6110620	Wedge Anchor, 3/8-16 x 3 3/4 Trubolt
6.	0167550	Anti-Tip Bracket
7.	6201190	Screw, #12 x 2 ½ Type AB PH Pan HD Zinc
8.	6200080	Screw, #8-15 x ½ Truss HD
9.	4323540	Power Cord
10.	4323540	Power Cord Retractor
11.	4202000	Leveler Assy.
12.	3570070	Leveler Bolt, Rear
13.	6200780	Screw, #10-24 x ½ PH Hex Washer
14.	0167662	Kickplate Bracket, Left Side
15.	3570060	Leveler Bolt, Front
16.	3421500	Leveler Rod
17.	6200050	Screw, #10-12 x ½ Pan HD
18.	0167661	Kickplate Bracket, Right Side
19.	3530430	Kickplate
20.	0167640	Evaporator Sump Cover
21.	3211491	Sump Cover Seal, Right Side
	3211492	Sump Cover Seal, Left Side
	3211493	Sump Cover Seal, Rear
22.	3421510	Bracket, Unit to Cabinet
	3421460	Bracket, Unit to Unit
23.	6200720	Screw #8-18 x ½ PH Truss HD
24.	6201140	Screw, #1/4-20 x ½ Sems BUT HD
25.	3412031	Drawer Slide, Right Side
	1228600	Drawer Mount Extrusion
26.	3022950	Cable Assembly
	4202770	Cabinet Wire Harness (Behind Rear Duct)
27.	3211600	Duct Divider, Vertical
28.	3412220	Divider Support
29.	3541020	Drawer Closer
30.	6200720	Screw, #8-18 x ½ PH Truss HD
31.	6200110	Screw, #10-12 x 5/8 Truss SS
32.	4151620	Lower Air Duct Assy.
33.	6200080	Screw, #8-15 x ½ Truss Hd.
34.	0167630	Bracket, Unit to Counter Top
35.	3516020	Side Molding
---	3580170	Nameplate (not shown)

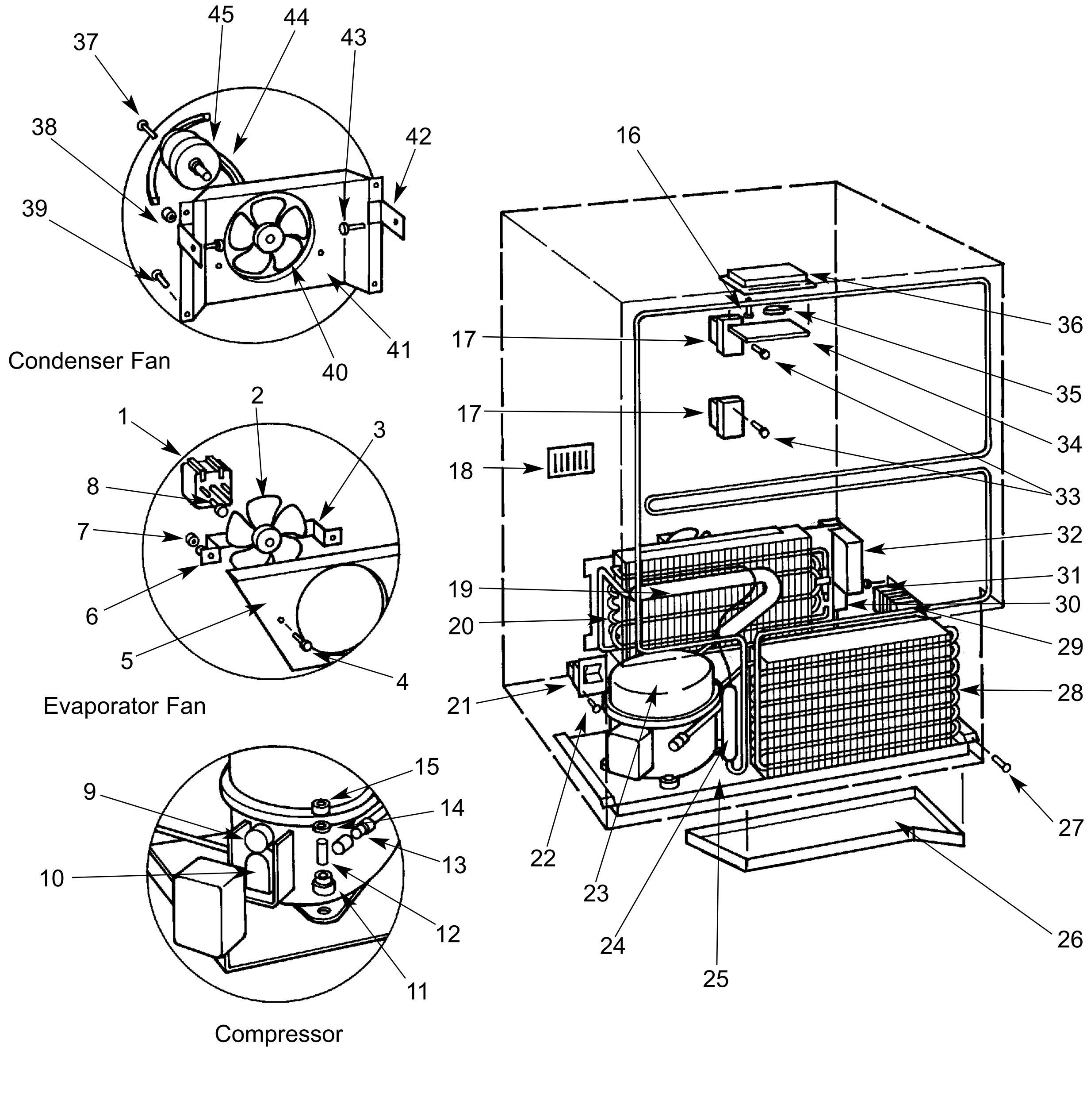
700BR COSMETIC VIEW



700BR SYSTEM VIEW

1.	4201940	Evaporator Fan Motor Assy.
2.	4201940	Evaporator Fan Blade
3.	0233500	Evaporator Fan Bracket
4.	6110020	Screw Grommet
5.	4201940	Evaporator Fan Shroud
6.	6240060	Star Washer, 1/4
7.	6150030	Nut, #10-24 Hex SS
8.	6110270	Bolt, #10-32 x 1/4 RD HD
9.	3111410	Overload
10.	3111370	Relay
11.	3150170	Grommet
12.	6160070	Sleeve
13.	3090090	Schrader Valve
14.	6240050	Washer, 5/16
15.	6150220	Nut, 5/16-18 Hex Zinc
16.	6200080	Screw, #8-15 x ½ Truss HD
17.	4202580	Reed Switch, Short
18.	3014140	Baffle Control
	3211440	Baffle Control Gasket
19.	4201920	Evaporator/Heat Exchanger Assy.
20.	4201920	Evaporator/Heat Exchanger Assy.
21.	3060240	Master Power Switch
22.	6200780	Screw, #10-24 x ½ PH Hex
23.	4201880	Compressor Assy.
24.	3014230	Drier
25.	0140340	Unit Sliding Tray
26.	0167450	Drain Pan
27.	6200780	Screw, #10-24 x ½ PH Hex
28.	3120310	Condenser Coil
29.	3090160	Transformer
30.	3012970	Coil Sensor/Thermistor
31.	6150790	Nut, #10-24 Sems
32.	4201994	Control Board Assy.
33.	6200280	Screw, #8-18 x Pan HD
34.	3500410	Light Lens
35.	3030090	Halogen Lamp, 20W
36.	4201980	Drawer Light Fixture Assy.
37.	6200490	Screw, #8-32 x 3/8 Hex Slot
38.	3220360	Condenser Fan Brckt Grommet
39.	6200060	Screw, #8-32 x ½ Pan HD
40.	0167440	Condenser Fan Shroud
41.	3150320	Condenser Fan Blade
42.	3450290	Angle Bracket
43.	6200010	Screw, #10-12 x 3/4 Pan HD
44.	0167430	Condenser Fan Bracket
45.	3150500	Condenser Fan Motor

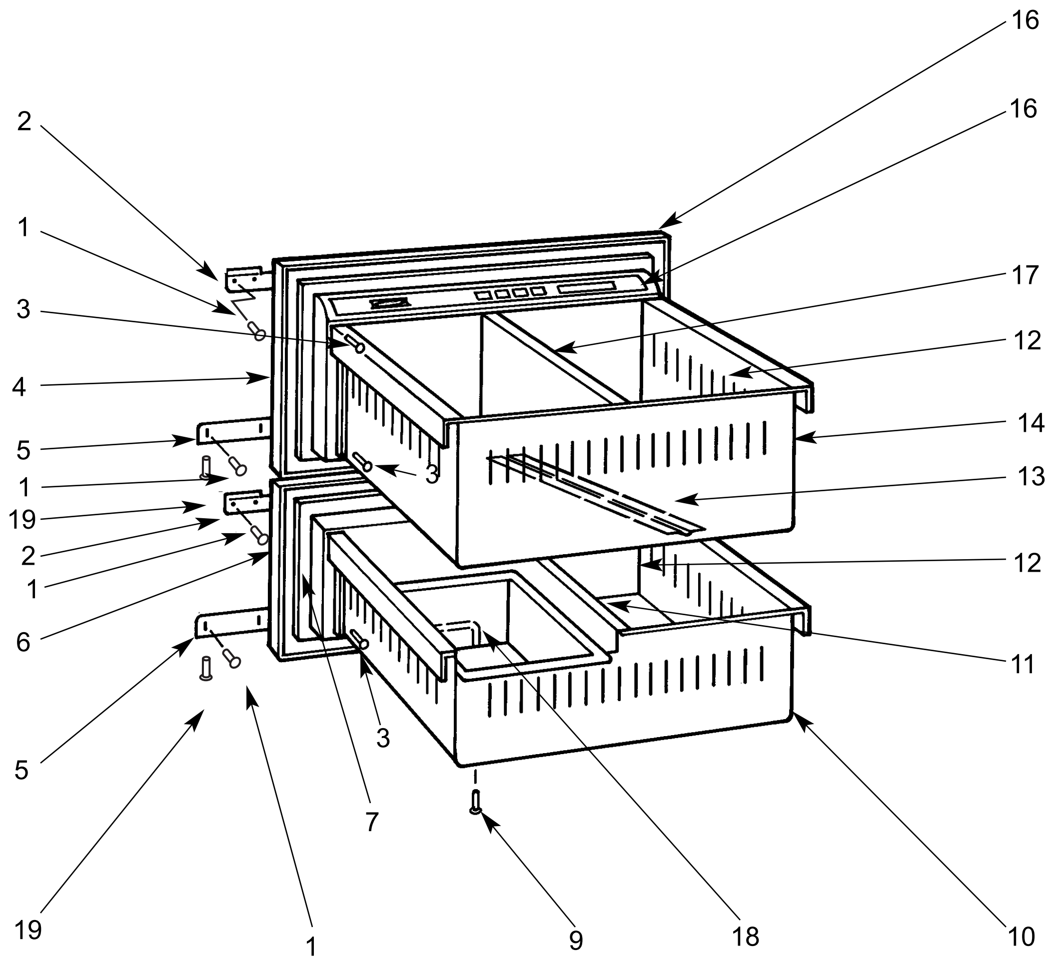
700BR SYSTEM VIEW



700BF/I DOOR VIEW

1. 6200720 Screw, #8-18 x 1/2 PH Truss HD.
2. 0183580 Drawer Panel Bracket, Upper
3. 6200110 Screw, #10-12 x 5/8 Truss SS
4. 3211520 Upper Drawer Gasket
5. 0183590 Drawer Panel Bracket, Lower
6. 4131750 Lower Drawer Front Assy.
7. 3211540 Lower Drawer Gasket
8. 3412080 Ice Bucket
9. 6200080 Screw, #8-15 x 1/2 Truss HD
10. 4131800 Lower Drawer Tub
11. 3601420 Lower Drawer Divider
12. 4202020 Drawer Tub Seal
13. 4202060 Upper Drawer Wire Channel
14. 4131770 Upper Drawer Tub
15. 4202030 Drawer Control Panel Assy.
16. 4131730 Upper Drawer Front Assy.
17. 3601340 Upper Drawer Divider
18. 3511040 Plastic 3" Wire Pull
19. 6200780 Screw, #10-24 x 1/2 PH Truss HD

700BF/I DOOR VIEW

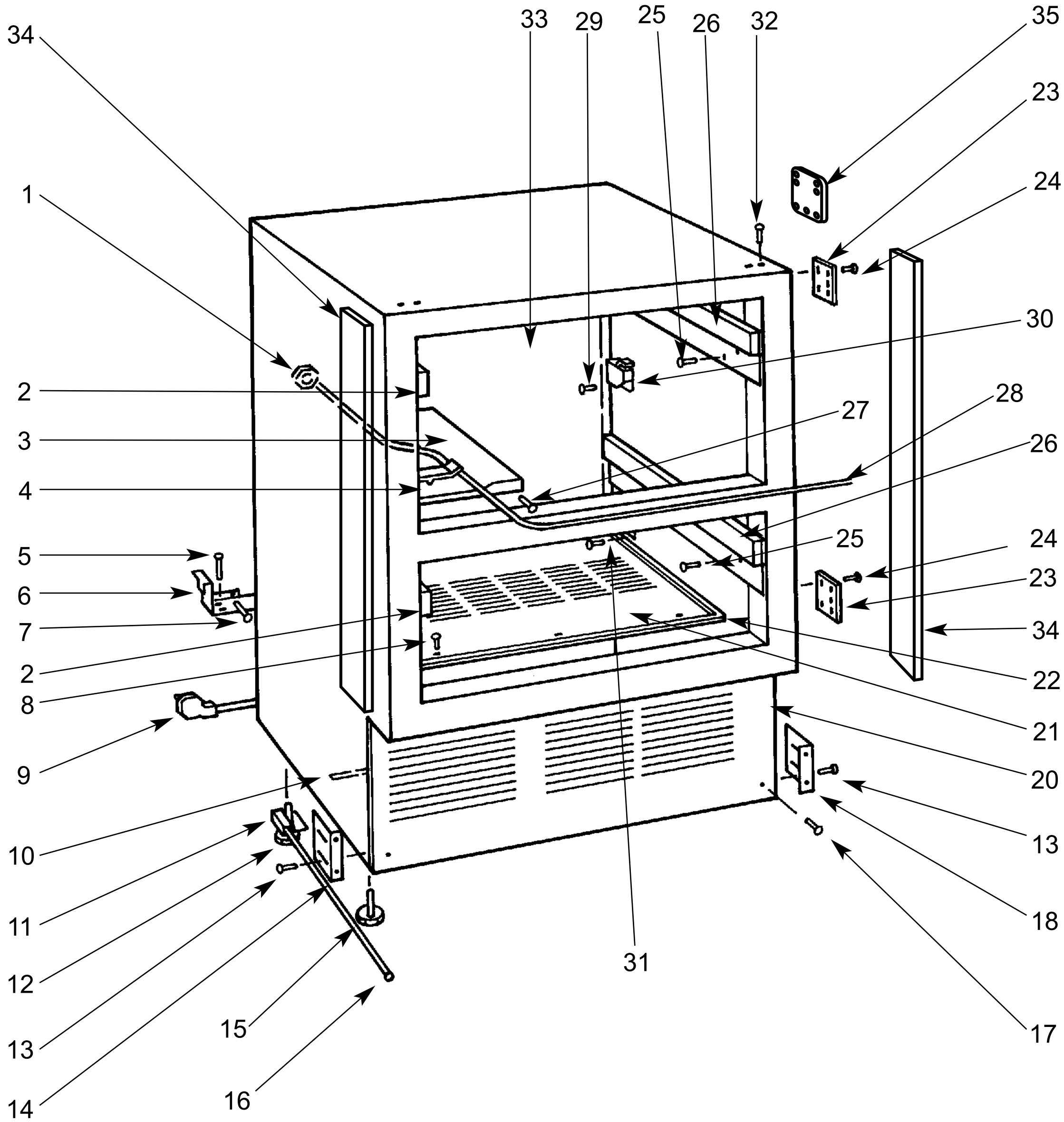


700BF/I COSMETIC VIEW

1. 6150800 Plastic Hex Nut, 5/8-27 UNS-2A
2. 3412032 Drawer Slide, Left Side
   1228600 Drawer Mount Extrusion
3. 0233490 Wire Tray
4. 3450780 Wire Clip
   6150760 Fastener
5. 6110620 Wedge Anchor, 3/8-16 x 3 3/4 Trubolt
6. 0167550 Anti-Tip Bracket
7. 6201190 Screw, #12 x 2 ½ Type AB PH Pan HD Zinc
8. 6200080 Screw, #8-15 x ½ Truss HD
9. 4323540 Power Cord
10. 4323540 Power Cord Retractor
11. 4202000 Leveler Assy.
12. 3570070 Leveler Bolt, Rear
13. 6200780 Screw, #10-24 x ½ PH Hex Washer
14. 0167662 Kickplate Bracket, Left Side
15. 3570060 Leveler Bolt, Front
16. 3421500 Adjusting Rod
17. 6200050 Screw, #10-12 x ½ Pan HD
18. 0167661 Kickplate Bracket, Right Side
19. 6200780 Screw, #10-24 x ½ PH Hex Washer
20. 3530430 Kickplate
21. 0167470 Evaporator Sump Cover
22. 3211491 Sump Cover Seal, Right Side
    3211492 Sump Cover Seal, Left Side
    3211493 Sump Cover Seal, Rear
23. 3421510 Bracket, Unit to Cabinet
    3421460 Bracket, Unit to Unit
24. 6200720 Screw, #8-18 x ½ PH Truss HD
25. 6201140 Screw, #1/4-20 x ½ Sems BUT HD
26. 3412031 Drawer Slide, Right Side
    1228600 Drawer Mount Extrusion
27. 6200080 Screw, #8-15 x ½ Truss HD
28. 3022950 Cable Assy.
    4202770 Cabinet Wire Harness (Behind Rear Duct)
29. 6200110 Screw, #10-12 x 5/8 Truss HD
30. 3541020 Drawer Closer
32. 6200720 Screw, #8-18 x ½ PH Truss HD
33. 4151630 Lower Air Duct Assy.
34. 3516020 Side Molding
35. 0167630 Bracket, Unit to Counter Top

--- 3580170 Nameplate (not shown)

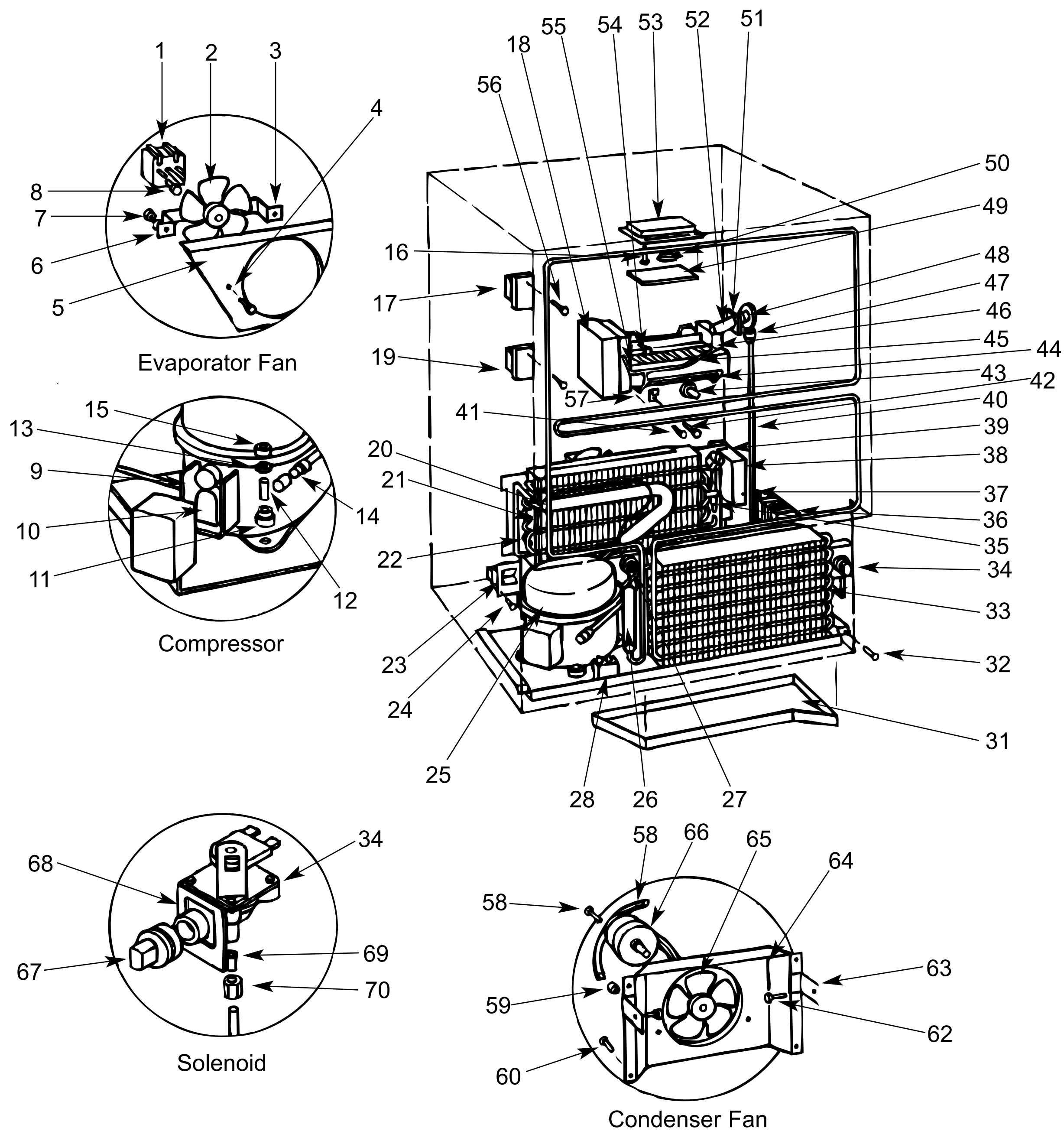
700BF/I COSMETIC VIEW



700BF/I SYSTEM VIEW

1.	4201940	Evaporator Fan Motor Assy.
2.	4201940	Evaporator Fan Blade
3.	0233500	Evaporator Fan Bracket
4.	6110020	Screw Grommet
5.	4201940	Evaporator Fan Shroud
6.	6240060	Star Washer, 1/4
7.	6150030	Nut, #10-24 Hex SS
8.	6110270	Bolt, #10-32 x 1/4 RD HD
9.	3111380	Overload
10.	3111350	Relay
11.	3150170	Grommet
12.	6160070	Sleeve
13.	6240050	Washer, 5/16
14.	3090090	Schrader Valve
15.	6150220	Nut, 5/16-18 Hex Zinc
16.	6200080	Screw, #8-15 x ½ Truss HD
17.	4202580	Reed Switch, Short
18.	4202090	Complete Icemaker Assy.
	3140160	Icemaker Cover
	628366	Motor Module Assy.
19.	4202570	Reed Switch, Long
20.	4201930	Evaporator/Heat Exchanger Assy.
21.	4201930	Evaporator/Heat Exchanger Assy.
22.	4201960	Defrost Heater Assy.
23.	3060240	Master Power Switch
24.	6200780	Screw, #10-24 x ½ PH Hex Washer
25.	4201860	Compressor Assy.
26.	3014230	Drier
27.	3013540	Drain Tube Heater
28.	3111270	Capacitor
	0167620	Capacitor Mounting Bracket
30.	0140340	Unit Sliding Tray
31.	0167450	Drain Pan
32.	6200780	Screw, #10-24 x ½ PH Hex Washer
33.	3120310	Condenser Coil
34.	4201450	Solenoid Valve
35.	4323800	Coil Sensor/Thermistor Assy.
36.	3090160	Transformer
37.	6200780	Screw, #10-24 x ½ PH Hex
38.	4201995	Control Board Assy.
39.	3082090	Defrost Terminator
40.	2600617	Water Line
41.	6201120	Screw, #8-18 x 1.75 Truss SS
42.	6200080	Screw, #8-15 x ½ Truss HD
43.	3060130	Icemaker Switch
44.	3140280	Icemaker Control Arm
45.	3140200	Icemaker Shut-Off Arm
46.	628356	Bearing & Inlet
47.	6220470	Fill Tube Clamp
48.	1607600	Water Inlet Tube
49.	3500410	Light Lens
50.	3030090	Halogen Lamp, 20W
51.	3013820	Fill Tube Heater
52.	2605405	Fill Tube Extension
53.	4201980	Drawer Light Fixture Assy.
54.	6201120	Screw, #8-18 x 1.75 Truss SS
55.	3421070	Icemaker Connecting Rod
56.	6200280	Screw, #8-18 x 1 Pan HD
57.	6220220	Screw Grommet
58.	6200490	Screw, #8-32 x 3/8 Hex Slot
59.	3220360	Cond Fan Bracket Grommet
60.	6200060	Screw, #8-32 x ½ Pan HD
61.	3150320	Condenser Fan Blade
62.	6200010	Screw, #10-12 x 3/4 Pan HD
63.	3450290	Angle Bracket
64.	0167440	Condenser Fan Shroud
65.	0167430	Cond Fan Mounting Bracket
66.	3150500	Condenser Fan Motor
67.	3520350	Water Inlet Fitting Assy.
68.	0166200	Solenoid Retainer
	6200780	Screw, #10-24 ½ PH Hex
69.	3520050	Brass Insert
70.	3520030	Nylon Nut

700BF/I SYSTEM VIEW



NOTES

SECTION 5

TROUBLESHOOTING GUIDES

GENERAL TROUBLESHOOTING GUIDE

Complaint	Possible Cause	Correction
Warm compartment temperatures. *Questions:* *What are zone temperatures and setpoints?* *Is zone indicator flashing?* *Is compressor running?* *Is door alarm beeping with door shut?* *Is condenser dirty?*	**Electronic Control function.**	
	1. Control shut off.	1. If "--" is displayed, unit is off. Press "COLDER" key to start the unit.
	2. Control setpoint is too warm.	2. Press "ZONE" key to check setpoints. Zone indicator will flash. Displayed temperature is now the setpoint. Set zone(s) to colder temperature(s).
	3. Zone thermistor malfunction. **⚠ CAUTION! Low voltage. DO NOT apply 115 volts.** NOTE: If a thermistor is unplugged or replaced, the unit must be turned OFF at the master power switch, then back ON to clear the error mode.	3. If "-20-" is displayed with zone indicator flashing, thermistor in that zone is unplugged or faulty. Repair wiring or replace thermistor. If "-55-" is displayed with zone indicator flashing, thermistor in that zone is shorted. Repair wiring or replace thermistor. NOTE: Resistance of thermistor should be approximately 32500 ohms at 32°F, 10000 ohms at 77°F.
	Insufficient condenser air,	
	1. Clogged condenser.	1. Clean condenser and instruct customer.
	2. Condenser fan obstructed or faulty.	2. Check condenser fan, clear obstruction or replace.
	3. Kickplate/grille restricted.	3. Remove restriction.
	Door/drawer air leak.	
	1. Food obstructing door/drawer closing.	1. Remove obstruction.
	2. Door/drawer gasket twisted or torn.	2. Repair or replace gasket.
	3. Door hinge binding (700TR, 700TC/I, 700TF/I only).	3. See DOOR CLOSING CHECK AND REPAIR PROCEDURES at end of Troubleshooting Guide.
	4. Drawer close tripped backwards.	4. Trip drawer closer forward.
	Poor air ducting.	
	1. Air leakage past vertical duct dividers.	1. See TC/I Air Seals at the end of Troubleshooting Guide.
	2. Air duct restriction.	2. Adjust vertical duct divider(s) and/or remove blockage.

GENERAL TROUBLESHOOTING GUIDE

Complaint	Possible Cause	Correction
Warm compartment temperatures (continued).	**Incomplete defrost Poor evaporator air flow.** NOTE: To initiate a manual defrost, see defrost section at front of Troubleshooting Guide.	
	1. Faulty door sensor (700 TC/I, 700TF/I only), or faulty reed switch (all models).	1. With door shut and reed switches depressed, check for 115V across P7 & P5 at control board. If 115V is present, repair wiring at door sensor or reed switch, or replace door sensor or reed switch.
	2. Evaporator fan faulty.	2. With door shut and reed switches depressed, check for 115V across P9 & P5 at control board. If no 115V, repair wiring at evaporator fan or replace evaporator fan.
	3. Evaporator fan blade obstructed.	3. Clear obstruction.
	4. Defrost terminator faulty.	4. Check wiring to terminator, then check terminator resistance. If the evaporator is below 30°F, terminator should be closed. If above 70°F, it should be open. Repair wiring or replace terminator if faulty.
	5. Defrost heater faulty.	5. Check for power to heater, then check resistance of heater. Resistance should be 20-30 ohms. Repair wiring or replace evaporator assy.
	6. Evaporator thermistor faulty. **⚠ CAUTION! Low voltage. DO NOT apply 115 volts.** NOTE: Evaporator thermistor terminates defrost at 52°F (700TC/I, 700TF/I, 700BF/I only).	6. Check wiring and resistance of evaporator thermistor. Resistance should be approximately 32500 ohms at 32°F, 10000 ohms at 77°F. Repair wiring or replace evaporator thermistor. NOTE: For models 700TC/I, 700TF/I, 700BF/I prior to serial #1201766, remove evaporator thermistor. This will defrost evaporator every 6 hours of compressor run time with a 20 minute dwell.
	7. Evaporator sump drain tube blocked.	7. Clear foreign material from drain tube.
	8. Drain tube heater faulty (700TC/I, 700TF/I, 700BF/I only).	8. Check wiring and resistance of drain tube heater. Resistance should be 1900 ohms. Repair wiring or replace.

GENERAL TROUBLESHOOTING GUIDE

Complaint	Possible Cause	Correction
Warm compartment temperature (continued).	**Poor Air Baffle operation 700TR, 700TC/I, 700BR only.** 1. Air baffle obstruction. 2. Air baffle faulty. **⚠CAUTION! Low voltage. DO NOT apply 115 volts.**	1. Clean foreign material from baffle so it slides freely. 2. At control board, with baffle harness disconnected from P4, check resistance of baffle coils (2 per baffle). Resistance across any two leads of baffle should be between 5-25 ohms. (See wiring diagram for unit being serviced.) If resistance is outside range, repair wiring or replace baffle.
	Sealed system issue.	See SEALED SYSTEM TROUBLESHOOTING GUIDE.
Compartment temperature too cold.	**Electronic Control function.** 1. Control set too cold. 2. Zone thermistor shorted. **⚠CAUTION! Low voltage. DO NOT apply 115 volts.** NOTE: If a thermistor is unplugged or replaced, the unit must be turned OFF at the master power switch, then turned back ON to clear the error mode.	1. Press "ZONE" key to check setpoints. Zone indicator will flash. Displayed temperature is now the setpoint. Set zone(s) to warmer temperature(s). 2. If "-55-" is displayed with zone indicator flashing, thermistor in that zone is shorted. Repair wiring or replace thermistor. NOTE: Resistance of thermistor should be approximately 32500 ohms at 32°F, 10000 ohms at 77°F.
	Poor air ducting. 1. Air leakage past vertical duct dividers. 2. Air duct restriction.	1. See TC/I Air Seals at end of Troubleshooting Guide. 2. Adjust vertical duct divider(s) and/or remove blockage.
Lighting inoperative. *Questions:* *Are the lights out?* *Is door alarm beeping with door shut?*	**Halogen lamp(s) faulty.** 1. Lamp(s) burnt out. **⚠CAUTION! Lamps very hot. Allow to cool before inspecting.**	1. Visually inspect the lamp(s) for signs of burn-out and replace if required.

GENERAL TROUBLESHOOTING GUIDE

Complaint	Possible Cause	Correction
Lighting inoperative (continued). **⚠CAUTION! Low voltage. DO NOT apply 115 volts.**	**Poor door closing 700TR, 700TC/I, 700TF/I only.**	
	1. Food obstructing door closing.	1. Remove obstruction.
	2. Door hinge binding, door not closing.	2. See DOOR CLOSING CHECK AND REPAIR at end of Troubleshooting Guide.
	Poor drawer reed switch operation.	
	1. Reed switch stuck closed. **⚠CAUTION! Low voltage. DO NOT apply 115 volts.**	1. Verify that reed switch actuator extends forward when drawer opens, if not, replace reed switch assy.
	2. Reed switch unplugged or faulty.	2. With door shut and reed switches depressed, check resistance of harness at P2 of control panel. If open, repair wiring or replace reed switch assy.
	Upper control panel assy. component malfunction 700TR, 700TC/I, 700TF/I only.	
	1. Thermal cut-out faulty.	1. Cut power at master power switch. Then, at upper control panel, check resistance across thermal cut-out. If open, replace upper control panel assy. NOTE: Thermal cut-out must be cool.
	2. Interlock switch faulty.	2. Cut power at master power switch. Then, at upper control panel, check resistance across interlock switch while interlock switch depressed. If open, replace upper control panel assy.
	Light transformer malfunction.	
	1. Transformer primary winding faulty.	1. Cut power at master power switch. Then check resistance across orange and white wires at P7 & P5. If open, repair wiring or replace transformer and control board.
	2. Transformer secondary winding faulty.	2. 700TR, 700TC/I, 700TF/I only. Restore power to unit and check the transformer secondary winding for 15V across P11 and the pink wire in the control board area. If no 15V, repair wiring or replace transformer.

GENERAL TROUBLESHOOTING GUIDE

Complaint	Possible Cause	Correction
Lighting inoperative (continued). **⚠CAUTION! Low voltage. DO NOT apply 115 volts.**	2. Transformer secondary winding faulty (continued).	2. 700BR, 700BF/I only. Check the transformer secondary winding for 15VAC at any light socket. If no 15VAC, repair wiring or replace transformer.
	Control board faulty.	Check for 115V across P6 & P5 at control board. If no 115V, check wiring to unit and to control board. Repair if faulty.
Lighting ON with doors and drawers shut. Door alarm keeps beeping. **⚠CAUTION! Low voltage. DO NOT apply 115 volts.**	**Faulty door sensor/reed switch.** 1. Faulty door sensor (700TR, 700TC/I, 700TF/I only), or faulty reed switch (all models).	1. With door shut and reed switches depressed, check for 115V across P7 & P5 at control board. If 115V is present, repair wiring at door sensor or reed switch, or replace door sensor or reed switch.
Display problems: 1. "--" on LCD.	1. Control is shut off.	1. Unit is OFF. Press COLDER key to start unit.
2. "-20" on LCD and indicator flashing.	2. Zone thermistor malfunction. **⚠CAUTION! Low voltage. DO NOT apply 115 volts.** NOTE: If a thermistor is unplugged or replaced, the unit must be turned OFF at the master power switch, then turned back ON to clear the error mode.	2. Thermistor in indicated zone is unplugged or faulty. Repair wiring or replace thermistor. NOTE: Resistance of thermistor should be approximately 32500 ohms at 32°F, 10000 ohms at 77°F.
3. "55" on LCD and indicator flashing.	3. Zone thermistor malfunction. **⚠CAUTION! Low voltage. DO NOT apply 115 volts.** NOTE: If a thermistor is unplugged or replaced, the unit must be turned OFF at the master power switch, then turned back ON to clear the error mode.	3. Thermistor in indicated zone is shorted. Repair wiring or replace thermistor.
4. "Su" on LCD and top lights off.	4. Blue wire of display cable is unhooked or faulty.	4. Repair wiring.
5. "-88" on LCD, top lights off and keys inoperative.	5. Red wire of display cable is unhooked or faulty.	5. Repair wiring.
6. Top lights off and keys inoperative.	6. Black, white, or yellow wire of display cable is unhooked or faulty.	6. Repair wiring.

GENERAL TROUBLESHOOTING GUIDE

Complaint	Possible Cause	Correction
Display problems(continued):		
7. Segment of a number missing on LCD.	7. LCD faulty.	7. Replace control panel assy.
8. LCD off, unit running.	8. Display cable is unhooked or faulty.	8. Repair wiring.
9. LCD too dark (700BR, 700BF/I only).	9. Normal. There is no lighting behind LCD of 700BR or 700BF/I (see CORRECTION for units prior to serial #1257640).	9. If 700BR or 700BF/I was manufactured prior to serial #1257640, replace control panel assy.
Door alarm on with doors and drawers shut.	**Faulty door sensor/reed switch.**	
	1. Faulty door sensor (700TR, 700TC/I only), or faulty reed switch (all models).	1. With door and reed switches depressed, check for 115V across P7 & P5 at control board. If 115V is present, repair wiring at door sensor or reed switch, or replace door sensor or reed switch.
Door alarm reactivates itself.	**Power outage.**	
	1. Alarm defaults to ON after a power outage or voltage spike.	1. Press ALARM key.
Door/drawer not closing.	**Poor door/drawer operation.**	
	1. Food obstructing door/drawer closing.	1. Remove obstruction.
	2. Door/drawer gasket twisted or torn.	2. Repair or replace gasket.
	3. Door hinge binding (700 TR, 700TC/I, 700TF/I only).	3. See DOOR CLOSING CHECK AND REPAIR at end of Troubleshooting Guide.
	4. Drawer close tripped backwards.	4. Trip drawer closer forward.
	5. Drawer not engaging slide locating pins.	5. Pull slide forward, lining up holes in drawer with locating pins on slides.
Internal moisture.	**Air infiltration/high humidity.**	
Questions:	1. Door/drawer not closing.	1. See DOOR/DRAWER NOT CLOSING above.
Where is the moisture?	2. Frequent door openings.	2. Instruct customer.
What are ambient conditions?	3. High relative humidity.	3. Instruct customer.

GENERAL TROUBLESHOOTING GUIDE

Complaint	Possible Cause	Correction
External moisture. *Questions:* *Where is the moisture?* *What are the ambient conditions?* *Are two units installed side-by-side?*	**Air infiltration/high humidity.** 1. Door/drawer not closing. 2. High usage. 3. High relative humidity. 4. Dual unit install package not used or faulty.	1. See DOOR/DRAWER NOT CLOSING above. 2. Instruct customer. 3. Instruct customer. 4. Check for dual unit install package. If present, check for 115V at wire harness by compressor. If no 115V, repair wiring. If 115V is present, check resistance of heater (263-313 ohms tall unit heater, 540-640 ohms base unit heater).If resistance is outside range, repair wiring or replace heater.
No ice.	**Inoperative or faulty icemaker system.** 1. No water line run to unit. 2. Ice maker system shut off. 3. Freezer too warm. 4. Jammed ice cube. 5. Ice bucket out of position. 6. Icemaker/drawer switch faulty. 7. Ice maker faulty.	1. Instruct customer to contact plumber. 2. Press ICE key. 3. Press COLDER key. 4. Remove jammed cube. 5. Make sure ice bucket depresses ice maker/drawer switch below icemaker when drawer closes. 6. Check resistance of icemaker/drawer switch with switch depressed. If open while depressed, replace switch. If switch is OK, check and repair wiring. 7. See ICEMAKER TROUBLESHOOTING GUIDE.

700 SERIES DOOR CLOSING CHECK AND REPAIR PROCEDURES

TOP DOOR HINGE:

1: Open door approximately 1", then let door go to see if it closes on its own. Repeat this three times.

2: If door fails to close, remove the top hinge cover from the top hinge arm, and remove the one top door hinge screw closest to the pivot point of the hinge. Then loosen the three remaining top door hinge screws almost all the way out.

3: Open door approximately 1", then let door go to see if it closes on its own. Repeat this three times.

4: If door closes all three times, install 700 Series Top Hinge Shims Package, part #4202290.

5: If door fails to close, remove the three remaining screws from the top door hinge and check the closing action of the hinge on its own. If it seems week, replace it.

BOTTOM DOOR HINGE:

1: Open door approximately 1", then let door go to see if it closes on its own. Repeat this three times.

2: If door fails to close, remove the bottom hinge cover from the bottom hinge arm, and remove all bottom door hinge screws. Then check the closing action of the hinge on its own. If it seems week, replace it.

700TC/I AIR SEALS

If Refrigerator Section Is Too Warm

- Make sure upper air duct is positioned in slot of transition duct. If not, reposition upper air duct (see #1, Figure 5-1).
- Check that all foam blocks are in position at top of transition duct, and are making a good seal against upper air duct (see #2, Figure 5-1). Reposition foam blocks as required, or order Foam Tape (3/4" x 1/8"), part no. 6230730, and apply to top of blocks.
- Make sure return air duct is not blocked by ice or frost (#3). Replace if defective with part no. 3013550.
- Check that right rear sump baffle is positioned tightly against back of sump (#4). Reposition baffle assembly if required and/or apply a bead of silicone sealant where baffle meets back of sump.
- Make sure evaporator fan assembly is correctly positioned with no play front to back (#5). Reposition if required.
- Check baffle operation by clenching refrigerator thermistor firmly in one hand to warm it. The baffle should open after 1-2 minutes.

If Refrigerator Section Is Too Cold

- Check that all foam blocks are in position at top of transition duct, and are making a good seal against upper air duct (see #2, Figure 5-1). Reposition foam blocks as required, or order Foam Tape (3/4" x 1/8"), part no. 6230730, and apply to top of blocks.
- Make sure the lower air duct is firmly against back wall and vertical duct dividers (#6). If not, tighten lower duct mounting screw and/or reposition vertical duct dividers and/or order Foam Tape (3/4" x 1/8"), part no. 6230730, and apply to top of vertical duct dividers and along side of flange of lower air duct.

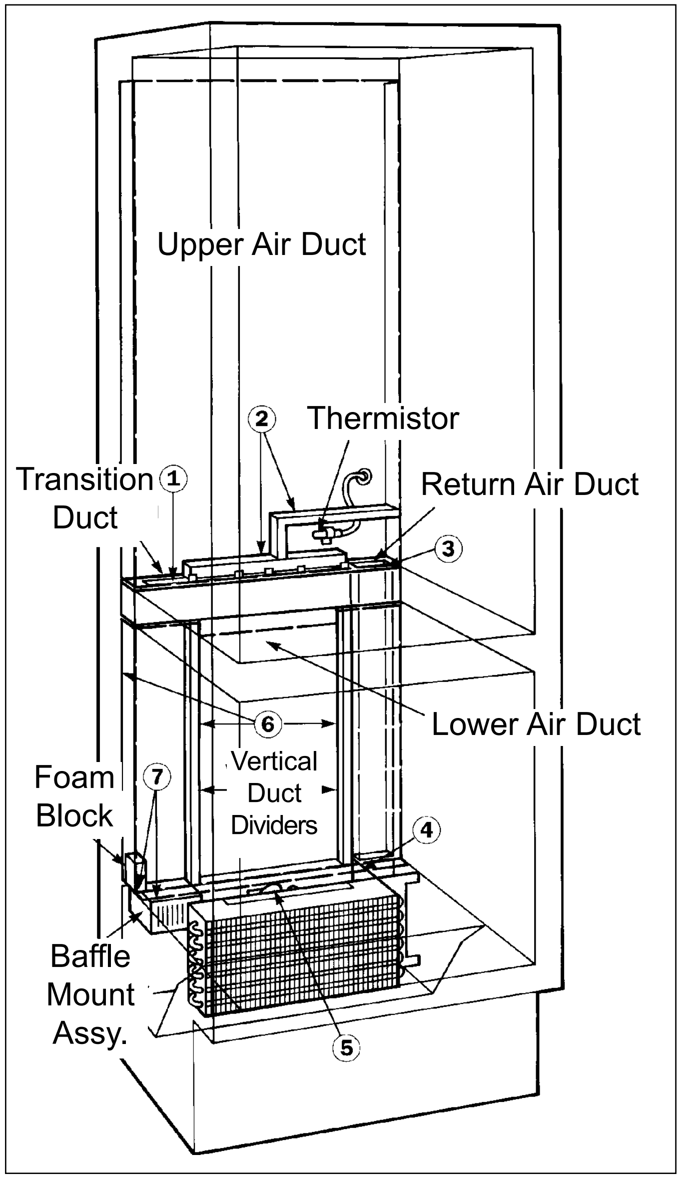


Figure 5-1. 700TC/I Air Seals

- Check that the baffle mount assembly is positioned firmly against bottom flange of air duct and foam block inside left corner of air duct. If necessary, reposition baffle mount assembly and/or order Foam Tape (3/4" x 1/8"), part no. 6230730, and apply to top of baffle mount assembly.
- Check baffle operation by placing refrigerator thermistor in a glass of ice water. The baffle should close after 1-2 minutes.

SEALED SYSTEM TROUBLESHOOTING GUIDE

Operating System Pressures

MODEL	70°F AMBIENT LOW SIDE	70°F AMBIENT HIGH SIDE	90°F AMBIENT LOW SIDE	90°F AMBIENT HIGH SIDE
700TR	8 to 18	85 to 95	9 to 19	105 to 115
700 TC/I	-2 to 2	75 to 85	-1 to 3	115 to 120
700TF/I	-2 to 2	80 to 90	-2 to 2	115 to 120
700BR	10 to 20	70 to 80	10 to 20	110 to 120
700 BF/I	-3 to 2	80 to 90	-2 to 3	110 to 120

Complaint	Possible Cause	Correction
Compressor runs excessive amount. Questions: *Is ambient temperature high?* *What is displayed on LCD?* *Are doors closing and sealing properly.* *When was condenser last cleaned?*	**Usage issue.** 1. High ambient temperature. 2. Excessive door openings.	1. Allow unit to adjust or ambient temperatures to decrease. 2. Allow unit to pull down to temperature with door closed.
	Insufficient condenser air flow. 1. Clogged condenser. 2. Condenser fan obstructed or defective.	1. Clean condenser and instruct customer. 2. Check condenser fan; clear obstruction or replace if faulty.

SEALED SYSTEM TROUBLESHOOTING GUIDE

Complaint	Possible Cause	Correction
Compressor runs excessive amount (continued).	**Kickplate/grille restricted.**	Remove restriction.
	Sealed system leak or low charge.	Check sealed system operating pressures. If low side and high side pressures are low, locate leak, flush system and repair or replace part. If leak is on low side, replace compressor and drier also. See OPERATING PRESSURES at beginning of Sealed System Troubleshooting Guide.
	Sealed system high side restriction.	Check sealed system operating pressures. If low side pressure is low, and high side pressure is high, locate high side restriction (crimped tubing, etc.) and repair. If restriction caused by low side leak allowing moisture into system, locate leak, flush system and repair or replace part. Replace compressor and drier also. See OPERATING PRESSURES at beginning of Sealed System Troubleshooting Guide.
	Inefficient compressor.	Check sealed system operating pressures. If low side pressure is high, and high side pressure is low, replace compressor. See OPERATING PRESSURES at beginning of Sealed System Troubleshooting Guide.
Compressor runs, but not cooling.	**See COMPRESSOR RUNS EXCESSIVE AMOUNT.**	See COMPRESSOR RUNS EXCESSIVE AMOUNT.
Compressor kicks out on overload. *Questions:* *When was condenser last cleaned?*	**Insufficient condenser air flow.** 1. Clogged condenser. 2. Condenser fan obstructed or faulty. 3. Kickplate/grille restricted.	 1. Clean condenser and instruct customer. 2. Check condenser fan, clear obstruction or replace if faulty. 3. Remove restriction.

SEALED SYSTEM TROUBLESHOOTING GUIDE

Complaint	Possible Cause	Correction
Compressor kicks out on overload (continued).	**Compressor malfunction.** 1. Relay and/or overload faulty. 2. Compressor rotor locked.	1.Use a starting cord to start compressor direct. If compressor starts, replace relay and overload. 2. Use a starting cord to start compressor direct. If compressor does not start, replace compressor. NOTE: If compressor has just cycled off, pressures will need to equalize before compressor will start.
	Sealed system overcharge.	Check sealed system operating pressures. If low side and high side pressures are high, evacuate system and recharge. See OPERATING PRESSURES at front of Sealed System Troubleshooting Guide.
	Heat exchanger separated. **⚠CAUTION! Line voltage must be between 105VAC to 125VAC. Improper line voltage could cause compressor to overheat.**	Check for 115V across P6 & P5 at control board. If voltage is outside of range (105VAC to 125VAC), have line voltage corrected.
Compressor will not start.	**Compressor malfunction.** 1. Relay and/or overload faulty. 2. Compressor rotor locked.	1.Use a starting cord to start compressor direct. If compressor starts, replace relay and overload. 2. Use a starting cord to start compressor direct. If compressor does not start, replace compressor. NOTE: If compressor has just cycled off, pressures will need to equalize before compressor will start.

ICEMAKER TROUBLESHOOTING GUIDE

⚠ WARNING! Disconnect power to icemaker before attempting repairs.

⚠ CAUTION! Do not attempt to jump start the icemaker through any ports other than "T" & "H". Probing the other ports while the unit is powered my cause the icemaker to short out.

Note: For detailed information on the modular icemaker, see the Icemaker Service Manual.

Complaint	Possible Cause	Correction
No ice/low ice production	1. Freezer not cold enough.	1. See GENERAL TROUBLESHOOTING GUIDE.
	2:00 ejector position (PARK):	
	1. No run when jumped between "T" & "H" ports.	1. Replace icemaker modular head.
	2. Open thermostat.	2. Check/replace thermostat (apply fresh alumilastic).
	3. No power to icemaker.	3. Trace power, repair wiring.
	4. Jammed cube.	4. Unjam cube and check fill cup and fill alignment tube.
	5. Little or no water to icemaker.	
	5a. Frozen fill tube (leaky water valve, inoperative fill tube heater).	5a. Check/replace water valve, check/replace fill tube heater or repair wiring.
	5b. Kinked water line between water valve & fill tube.	5b.Un-kink water line or replace.
	5c. Water line to unit obstructed.	5c.Clear obstruction.
	5d. Clogged screen in water valve.	5d.Replace water valve.
	5e. No power to water valve.	5e.Trace power, check wiring, repair wiring.
	5f. Low water pressure (must be between 20 - 120 psi).	5f.Increase supply water pressure.
	NOTE: jump between "T" & "H" ports for 10 seconds. Remove jumper & catch water. Should be 130cc's.	
	5g. High water pressure (must be between 20-120 psi).	5g.Decrease supply water pressure.
	5h. Open heater circuit (ports "L" & "H" = 72 ohms).	5h.Replace mold and heater assembly.
	5i. Closed thermostat.	5i.Check/replace thermostat (apply fresh alumilastic).

ICEMAKER TROUBLESHOOTING GUIDE

Complaint	Possible Cause	Correction
No ice/low ice production (continued)	5j. Damaged heater or thermostat tulips on module.	5j.Replace icemaker modular head.
	5k. Heater pins too short, not contacting module.	5k.Replace mold and heater assembly.
	6. Ice level locked in UP position.	6. Lower ice level arm.
	7. Ice level arm binds.	
	7a. Ice in actuator/ice level arm hole.	7a.Remove module, clear ice from hole and dry housing.
	7b. Housing hole small or burred.	7b.De-burr hole or replace icemaker.
	7c. Actuator O.D. large or burred.	7c.Replace icemaker modular head.
	7d. Module housing damaged.	7d.Replace icemaker modular head.
	7e. Ice level arm misformed.	7e.Replace ice level arm.
	7f. Hole in fill cup small, misformed or burred.	7f.Clear burrs or replace fill cup.
	8. Little or no alumilastic on thermostat.	8. Apply fresh alumilastic.
	9. Module not properly secured to housing.	9. Tighten screws (20-26 in/lbs).
	10. Heater not staked into mold completely.	10. Replace mold and heater assembly.
	11. Wrong heater voltage.	11. Replace mold and heater assembly.
	12. Broken cam follower.	12. Replace icemaker modular head.
	3:00 ejector position:	
	1. No run when jumped between “T” & “H” ports.	1. Replace icemaker modular head.
	2. Jammed cube.	2. Unjam cube and check fill cup and fill tube alignment.
	3. Icemaker and/or unit not level.	3. Level as necessary.
	4. No power to icemaker.	4. Trace power, repair wiring.
	5. Excessive water fill volume.	5. Adjust water fill, or replace water valve, or decrease supply water pressure.
	6. Cubes fell back on mold during eject.	6. Check fill cup and fill tube alignment.
	4:00 ejector position:	
	1. Thermostat out of calibration.	1. Replace thermostat (apply fresh alumilastic).

ICEMAKER TROUBLESHOOTING GUIDE

Complaint	Possible Cause	Correction
No ice/low ice production (continued)	2. Open heater circuit (module gear should be turning).	2. Replace mold and heater assembly.
	3. Heater not staked into mold completely.	3. Replace mold and heater assembly.
	4. Broken cam follower.	4. Replace icemaker modular head.
	6:00 ejector position:	
	1. No run when jumped between “T” & “H” ports.	1, Replace icemaker modular head.
	2. Hollow cubes.	2. See HOLLOW CUBES below.
	3. Insufficient water volume to icemaker.	3. See LITTLE OR NO WATER TO ICE-MAKER above.
	7:30 ejector position:	
	1. No run when jumped between “T” & “H” ports.	1. Replace icemaker modular head.
	2. Ice level arm stuck in ice or obstructed.	2. Clear obstruction.
	3. “Pac-Man” cubes.	3. Check fill cup and fill tube alignment.
	11:00 - 2:00 ejector position:	
	1. No run when jumped between “T” & “H” ports.	1. Replace icemaker modular head.
	2. Damaged contact fingers.	2. Replace icemaker modular head.
	3. Cubes frozen to fill cup, mold or ice level arm.	3. Unjam and restart.
Overproduction of ice	1. Ice bucket out of position.	1.Reposition ice bucket.
	2. Ice level arm not in actuator.	2. Press ice level arm into actuator.
	3. Shut-off lever broken or bypassing.	3. Replace icemaker modular head.
	4. Broken module actuator.	4. Replace icemaker modular head.
Hollow cubes	1. Water fill volume too low.	1. Adjust water fill, or increase supply water pressure.
	2. Improper freezer air flow.	2. See GENERAL TROUBLESHOOTING GUIDE.
	3. Thermostat out of calibration.	3. Replace thermostat (apply fresh alumi-lastic).

ICEMAKER TROUBLESHOOTING GUIDE

Complaint	Possible Cause	Correction
Water or ice slab in ice bucket or freezer compartment	1. Thermostat out of calibration.	1. Replace thermostat (apply fresh alumilastic).
	2. Jammed cubes during water fill (11:00 ejector position).	2. Remove jam, determine reason for cube stall.
	3. Leaky water valve.	3. Replace water valve.
	4. Excessive fill volume.	4. Adjust water fill, or replace water valve, or decrease supply water pressure.
	5. Motor stalled during water fill (11:00 ejector position).	5. Replace icemaker modular head.
	6. fill tube not properly installed in fill cup.	6. Adjust fill tube.
	7. Fill cup broken.	7. Replace fill cup.
	8. Ice cubes fell over back of icemaker or missed ice bucket.	8. Adjust fill tube and/or ice bucket.
	9. White and brown wires reversed on harness.	9. Repair wiring and replace icemaker.
	10. Shorted water fill track on module.	10. Replace icemaker modular head.
Noisy	1. Motor or gear grinding during production.	1. Replace icemaker modular head.
	2. Screeching during ejection.	2. Lubricate vertical cam end or replace icemaker modular head.
	3. Excessive noise during water fill.	3. Replace water valve or adjust water supply line.
	4. Water flowing through valve, ice falling in ice bucket, ice level arm falling to down position.	4. Normal operation, no repairs needed, instruct customer.
Jammed cubes	1. Cubes hollow or too small.	1. See HOLLOW CUBES section above.
	2. Cubes fell back into mold (Pac-Man).	2. Check fill cup and fill tube alignment.
	3. Mound on top of cubes.	3. Cubes freezing too fast, adjust freezer temperature and/or air flow.
	4. Icemaker and/or unit not level.	4. Level as needed.

NOTES

SECTION 6

TECHNICAL DATA

COMPONENT TECHNICAL INFORMATION

Model	700TR	700TC/I	700TF/I	700BR	700BF/I
Refrigerant	134a(8 oz.)	134a(8 oz.)	134a(8 oz.)	134a(6 oz.)	134a(6 oz.)
Compressor	Embraco (EMI30HER) 280BTU .9 AMPS	Embraco (FHS70HA) 715BTU 1.2 AMPS	Americold (RH108) 840BTU 1.4 AMPS	Embraco (EMI30HER) 280BTU .9 AMPS	Embraco (FHS70HA) 715BTU 1.2 AMPS
Sealed System Pressures	*	*	*	*	*
Drain Tube Heater		1900 OHMS	1900 OHMS		1900 OHMS
Defrost Heater		21 OHMS	21 OHMS		27 OHMS
Defrost Terminator		70°F cut-out 30°F cut-in	70°F cu-tout 30°F cut-in		70°F cu-tout 30°F cut-in
Thermistor	32500 OHMS at 32°F 10000 OHMS at 77°F	32500 OHMS at32°F 10000 OHMS at 77°F	32500 OHMS at 32°F 10000 OHMS at 77°F	32500 OHMS at 32°F 10000 OHMS at 77°F	32500 OHMS at 32°F 10000 OHMS at 77°F
Air Baffle Coils	5-25 OHMS	5-25 OHMS		5-25 OHMS	

* See front of SEALED SYSTEM TROUBLESHOOTING GUIDE.

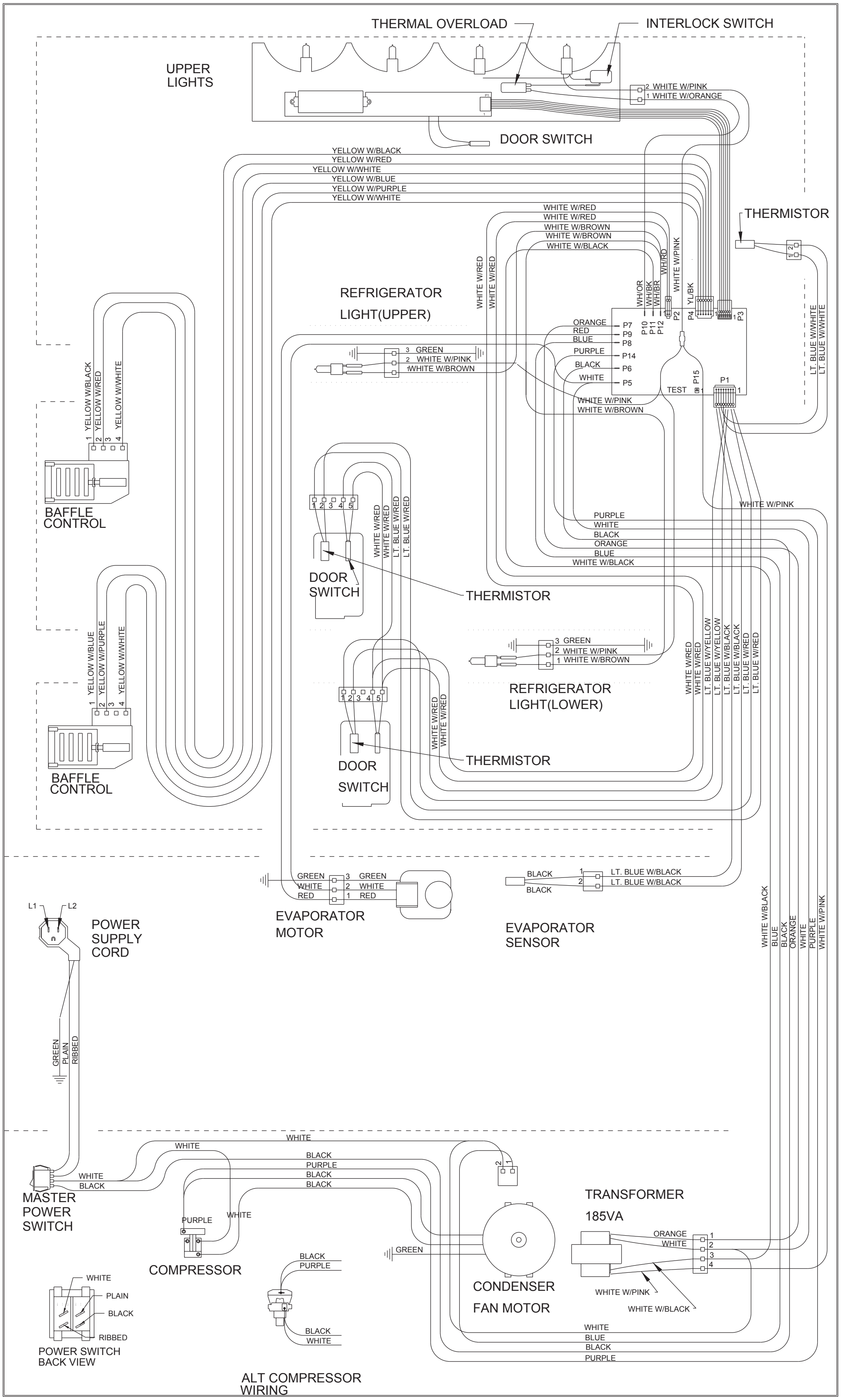
SECTION 7

WIRING DIAGRAMS
&
SCHEMATICS

NOTE: Due to our Continuous Improvement Program, it is recommended to always use the wiring diagram & schematic supplied with the unit, located in the envelope in the compressor area. This section is for referencing prior to servicing or if the wiring diagram & schematic are missing from the unit.

SUB-ZERO 700 Series

WIRING DIAGRAM - MODEL 700TR



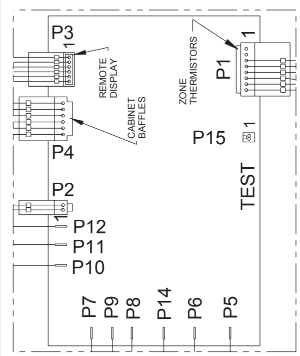
⚠ WARNING

This wiring information is provided for use by qualified service personnel only.

Disconnect appliance from electrical supply before beginning service.

Be sure all grounding devices are connected when service is completed.

Failure to observe the above warnings may result in severe electrical shock.



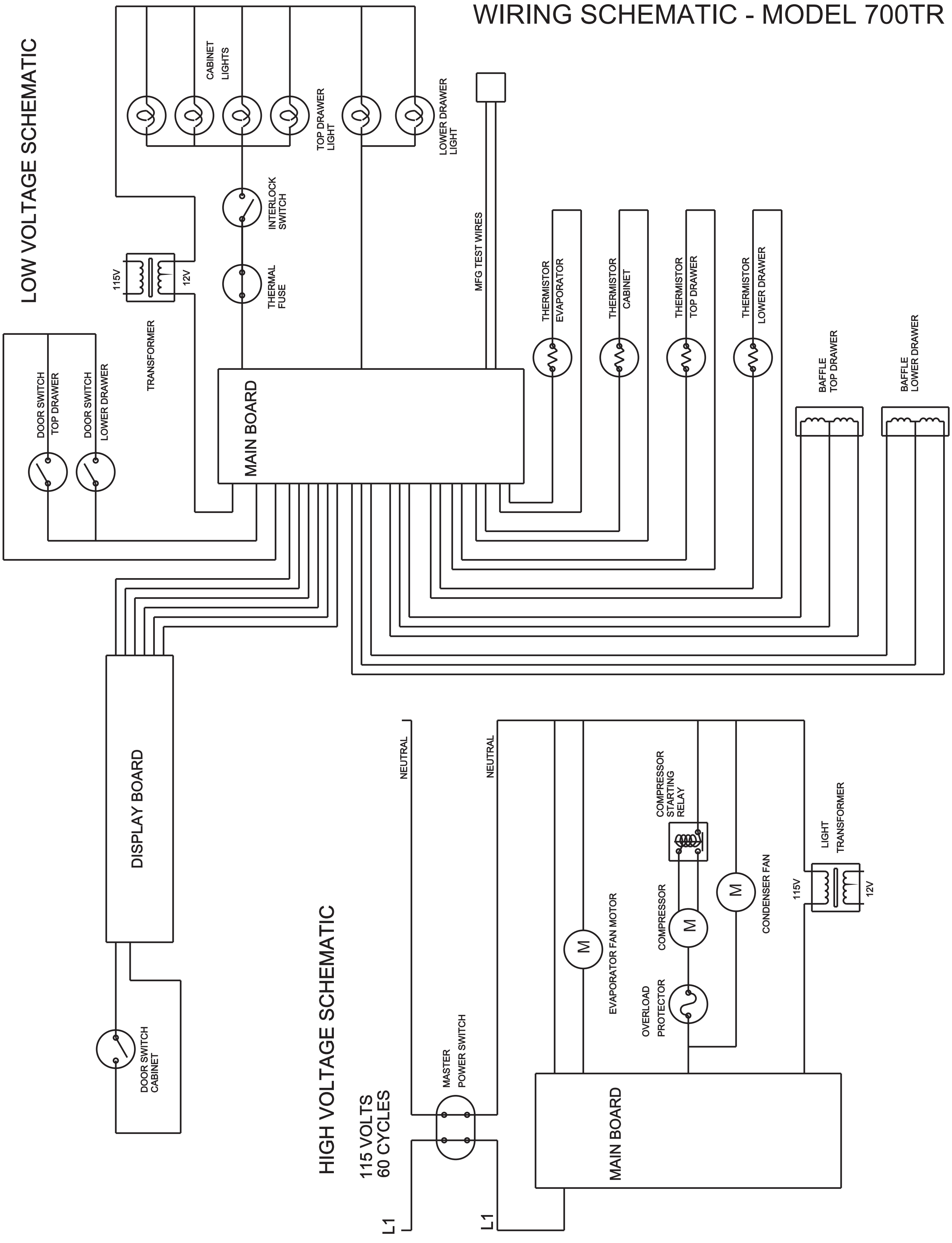
CONTROL BOARD DETAIL
ROTATED 90 DEGREES

TERM.	No#	COLOR
P1	1	EMPTY
	2	EMPTY
	3	LT. BLUE W/WHITE
	4	LT. BLUE W/WHITE
	5	LT. BLUE W/YELLOW
	6	LT. BLUE W/YELLOW
	7	LT. BLUE W/BLACK
	8	LT. BLUE W/BLACK
P3	1	BLACK
	2	WHITE
	3	RED
	4	YELLOW
	5	ORANGE
	6	BLUE
P4	1	YELLOW/BLACK
	2	YELLOW/RED
	3	YELLOW/WHITE
	4	EMPTY
	5	EMPTY
	6	EMPTY

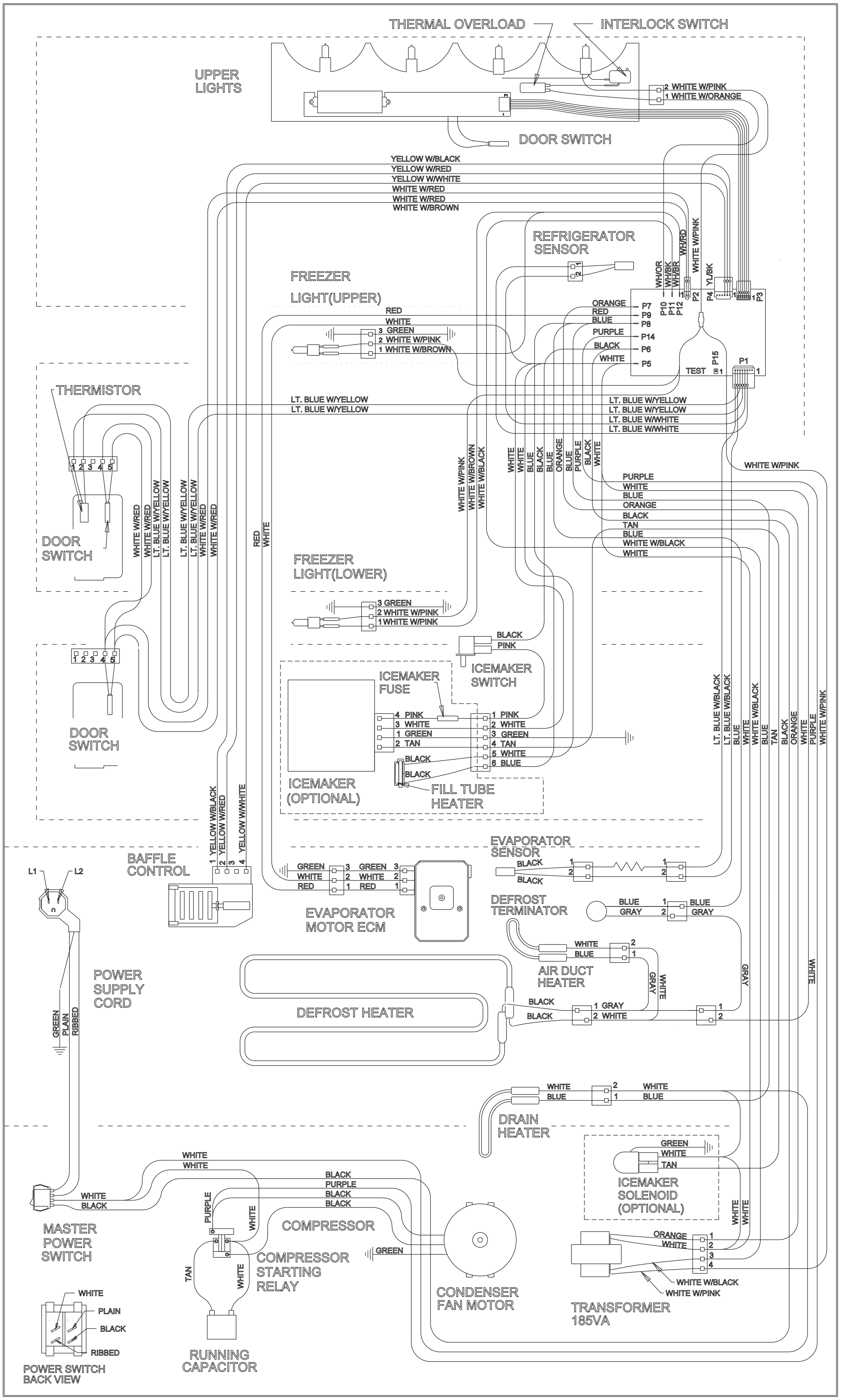
AUXILIARY CHART

TERM.	DESCRIPTION	COLOR	ABBR.
P1	THERMISTORS	SEE AUX. CHART	-----
P2	LIGHT SWITCH	WHITE/RED	WH/RD
P3	REMOTE DISPLAY	SEE AUX. CHART	-----
P4	BAFFLES	SEE AUX. CHART	-----
P5	L2-NEUTRAL 115	WHITE	WHITE
P6	L1-HOT 115	BLACK	BLACK
P7	LIGHTS-120V OUT	ORANGE	ORANG
P8	------	------	-----
P9	EVAPORATOR FAN	RED	RED
P10	LIGHT ZONE 1	WHITE/ORANGE	WH/OR
P11	TRANSFORMER IN-12V	WHITE/BLACK	WH/BK
P12	LIGHTS-LOWER-12V	WHITE/BROWN	WH/BR
P13	------	------	---
P14	COMPRESSOR	PURPLE	PURPL
P15	MANUFACTURING TEST	------	TEST

WIRING SCHEMATIC - MODEL 700TR



WIRING DIAGRAM - MODEL 700TC, 700TCI



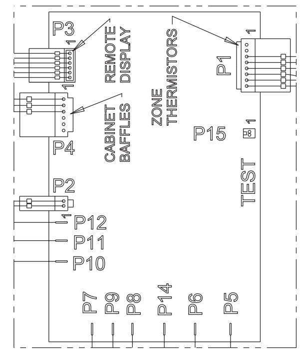
⚠ WARNING

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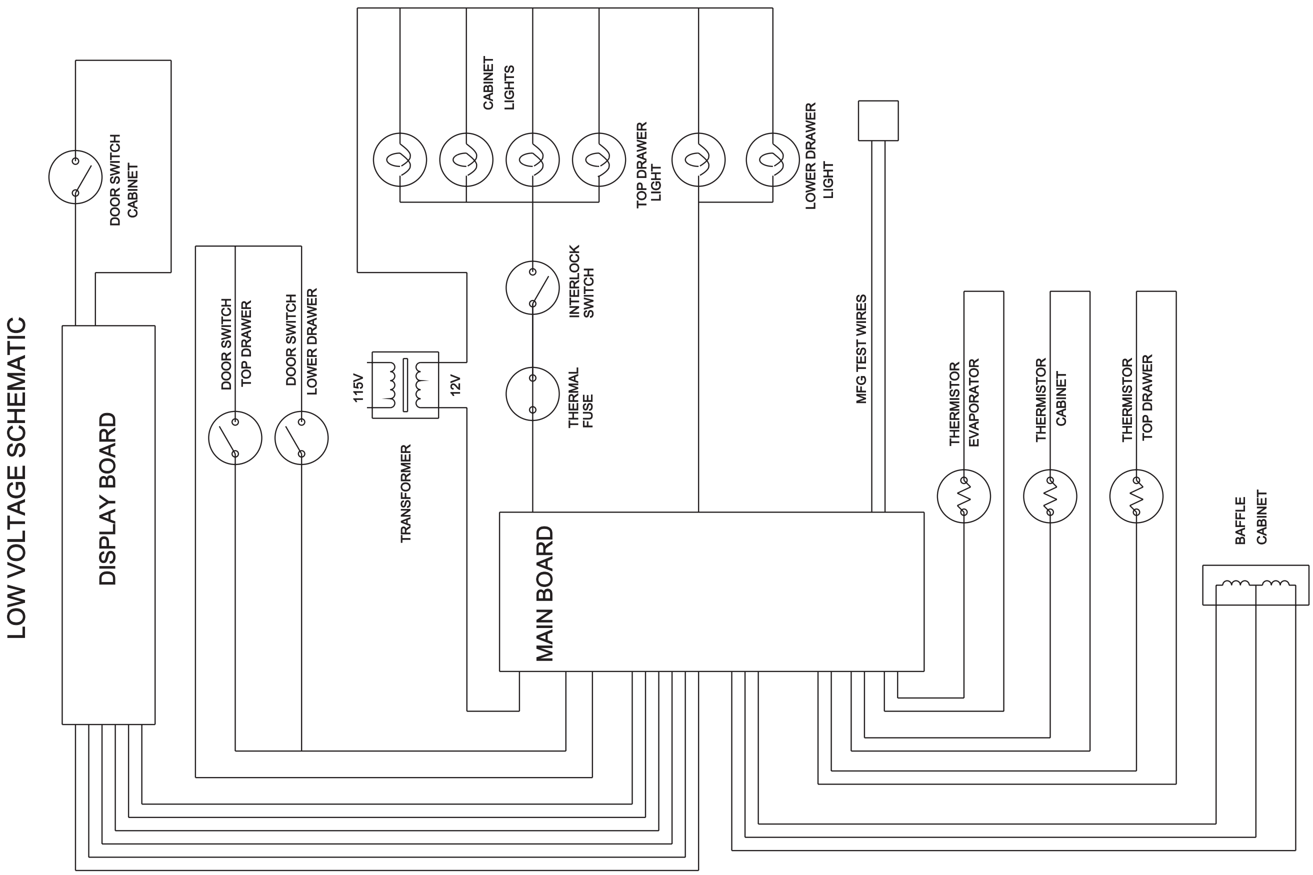
CONTROL BOARD DETAIL
ROTATED 90 DEGREES

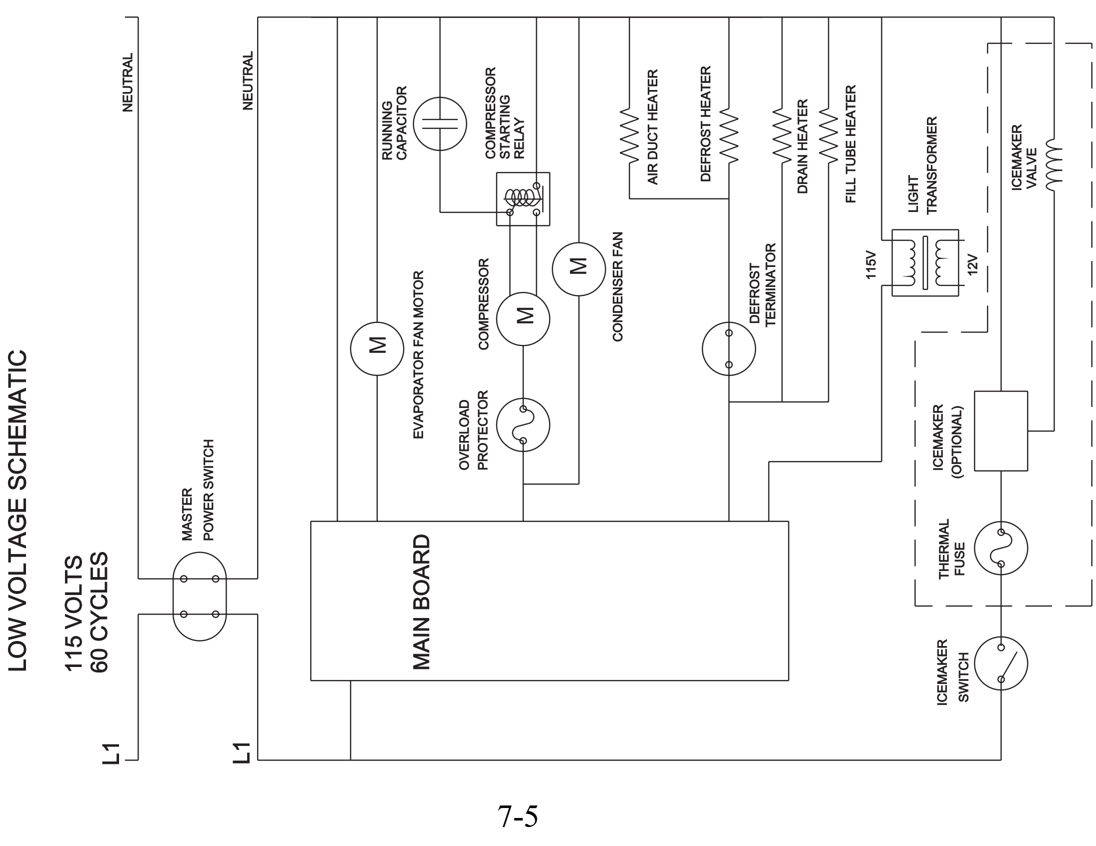
TERM.	No#	COLOR
P1	1	EMPTY
	2	EMPTY
	3	LT. BLUE W/WHITE
	4	LT. BLUE W/WHITE
	5	LT. BLUE W/YELLOW
	6	LT. BLUE W/YELLOW
	7	LT. BLUE W/BLACK
	8	LT. BLUE W/BLACK
P3	1	BLACK
	2	WHITE
	3	RED
	4	YELLOW
	5	ORANGE
	6	BLUE
P4	1	YELLOW/BLACK
	2	YELLOW/RED
	3	YELLOW/WHITE
	4	EMPTY
	5	EMPTY
	6	EMPTY

AUXILIARY CHART

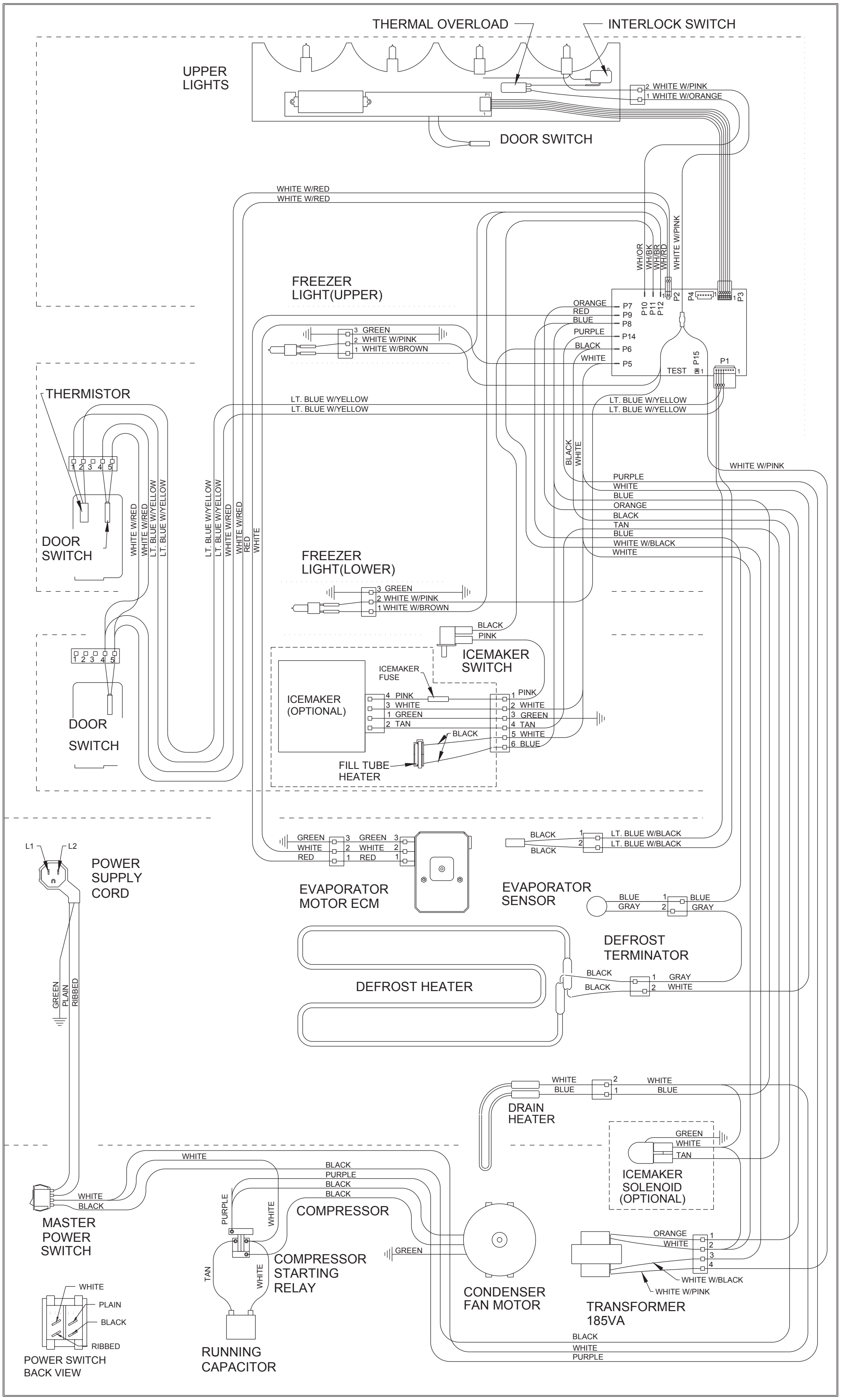
TERM.	DESCRIPTION	COLOR	ABBR.
P1	THERMISTORS	SEE AUX. CHART	-----
P2	LIGHT SWITCH	WHITE/RED	WH/RD
P3	REMOTE DISPLAY	SEE AUX. CHART	-----
P4	BAFFLES	SEE AUX. CHART	-----
P5	L2-NEUTRAL 115	WHITE	WHITE
P6	L1-HOT 115	BLACK	BLACK
P7	LIGHTS-120V OUT	ORANGE	ORANG
P8	DEFROST HEATER	BLUE	BLUE
P9	EVAPORATOR FAN	RED	RED
P10	LIGHT ZONE 1	WHITE/ORANGE	WH/OR
P11	TRANSFORMER IN-12V	WHITE/BLACK	WH/BK
P12	LIGHTS-LOWER-12V	WHITE/BROWN	WH/BR
P13	------	------	----
P14	COMPRESSOR	PURPLE	PURPL
P15	MANUFACTURING TEST	------	TEST

WIRING SCHEMATIC - MODEL 700TC, 700TCI





WIRING DIAGRAM - MODEL 700TF, 700TFI



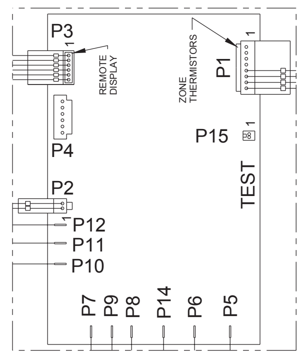
⚠ WARNING

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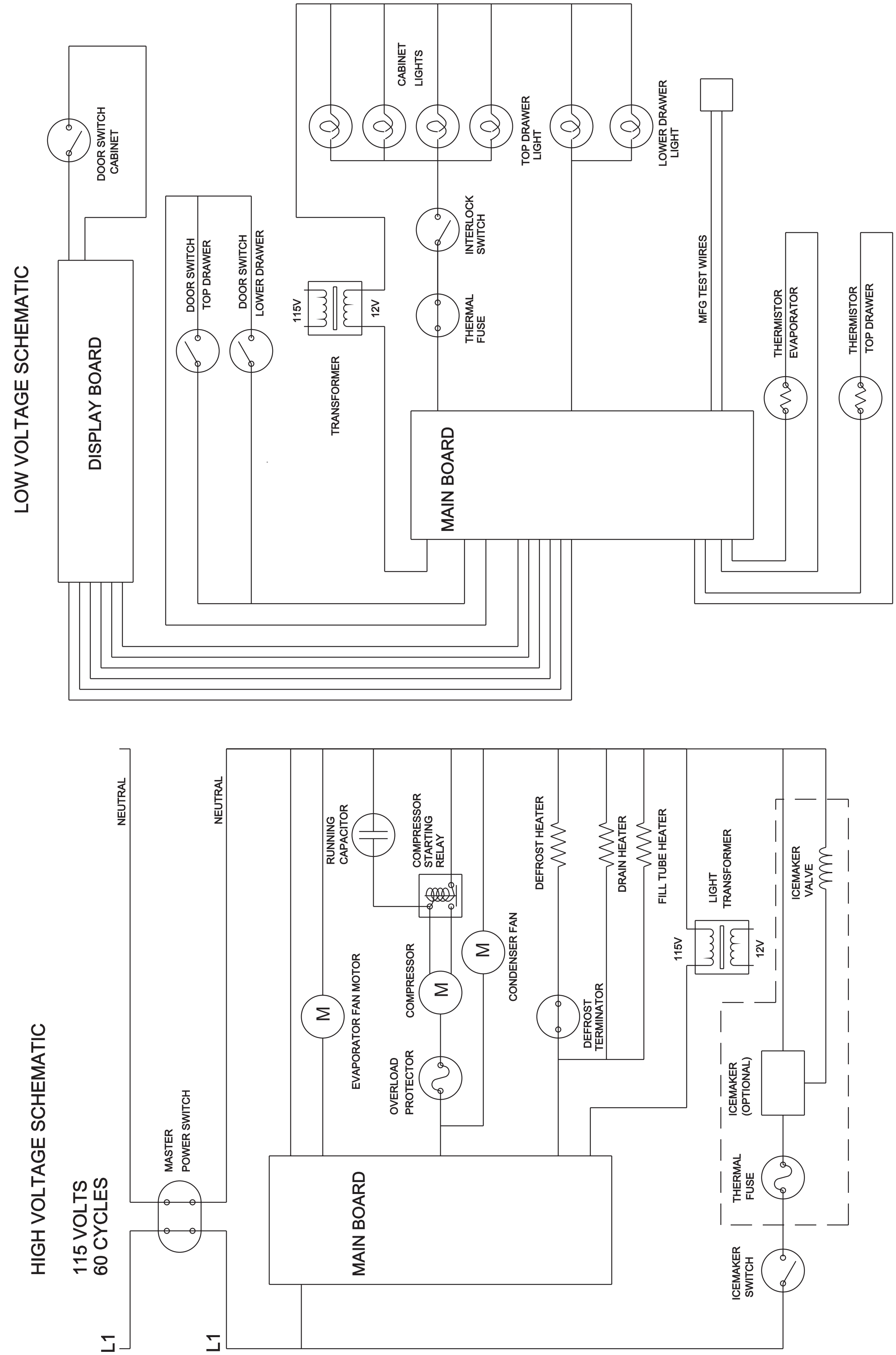
CONTROL BOARD DETAIL ROTATED 90 DEGREES

AUXILIARY CHART

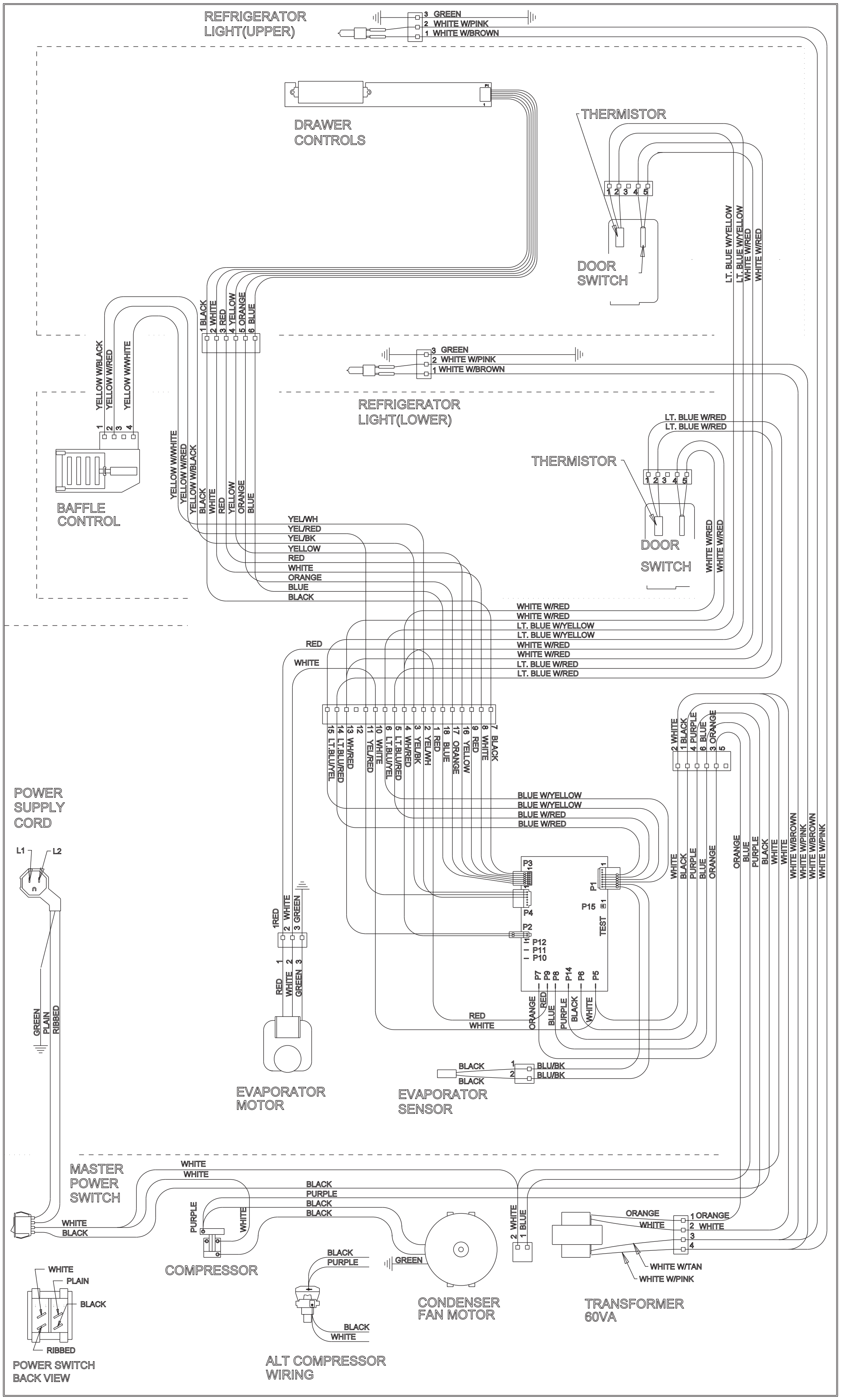
TERM.	No#	COLOR
P1	1	EMPTY
	2	EMPTY
	3	EMPTY
	4	EMPTY
	5	LT. BLUE W/YELLOW
	6	LT. BLUE W/YELLOW
	7	LT. BLUE W/BLACK
	8	LT. BLUE W/BLACK
P3	1	BLACK
	2	WHITE
	3	RED
	4	YELLOW
	5	ORANGE
	6	BLUE

TERM.	DESCRIPTION	COLOR	ABBR.
P1	THERMISTORS	SEE AUX. CHART	-----
P2	LIGHT SWITCH	WHITE/RED	WH/RD
P3	REMOTE DISPLAY	SEE AUX. CHART	-----
P4	-----	-----	-----
P5	L2-NEUTRAL 115	WHITE	WHITE
P6	L1-HOT 115	BLACK	BLACK
P7	LIGHTS-120V OUT	ORANGE	ORANG
P8	DEFROST HEATER	BLUE	BLUE
P9	EVAPORATOR FAN	RED	RED
P10	LIGHT ZONE 1	WHITE/ORANGE	WH/OR
P11	TRANSFORMER IN-12V	WHITE/BLACK	WH/BK
P12	LIGHTS-LOWER-12V	WHITE/BROWN	WH/BR
P13	-----	-----	-----
P14	COMPRESSOR	PURPLE	PURPL
P15	MANUFACTURING TEST	-----	TEST

WIRING SCHEMATIC - MODEL 700TF, 700TFI



WIRING DIAGRAM - MODEL 700BR



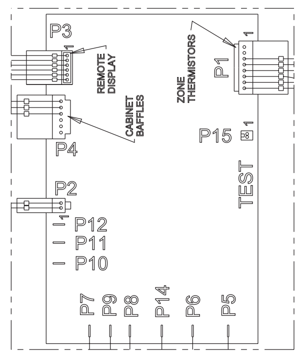
⚠ WARNING

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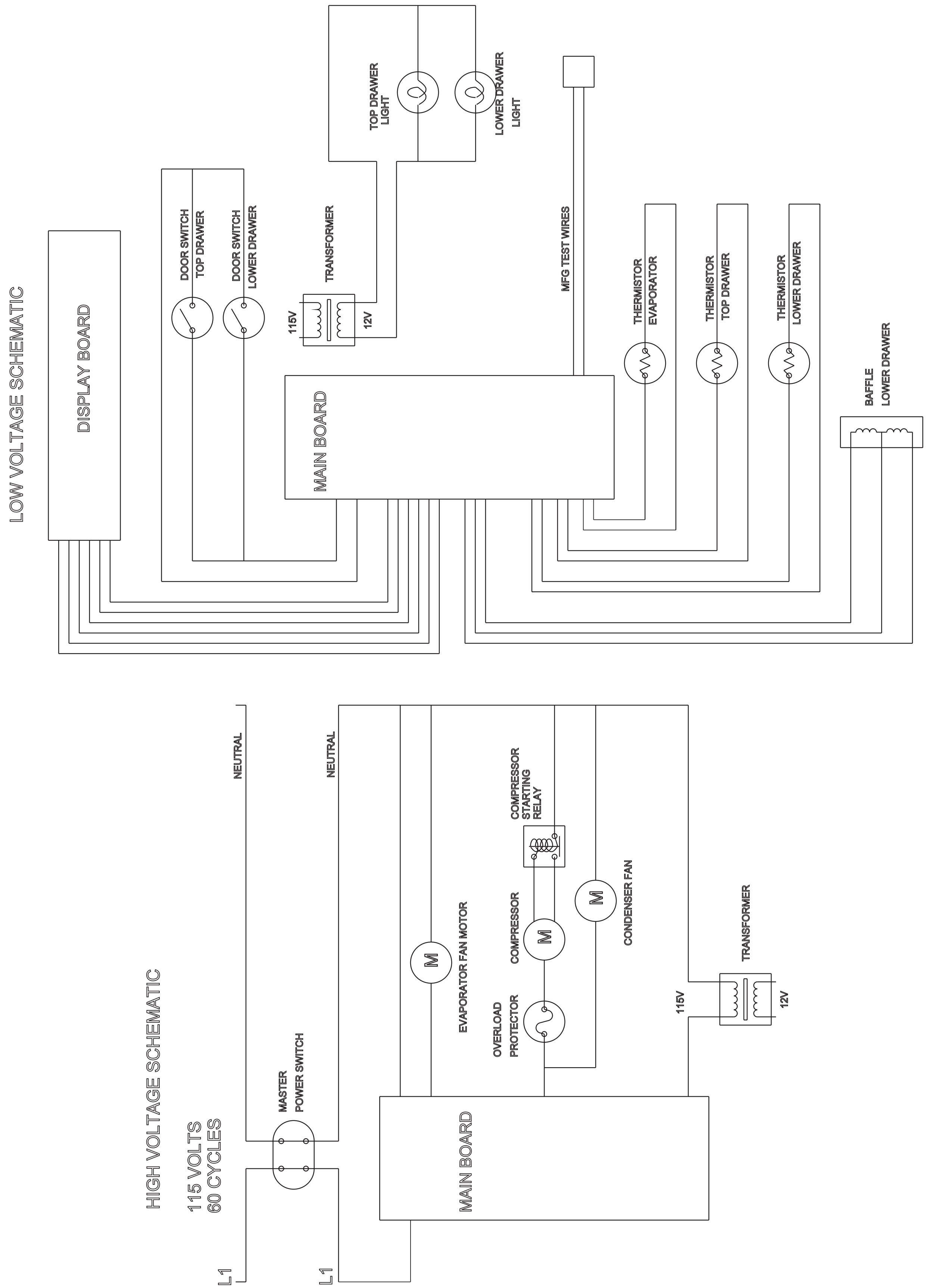
CONTROL BOARD DETAIL

TERM.	No#	COLOR
P1	1	EMPTY
	2	EMPTY
	3	LT. BLUE W/WHITE
	4	LT. BLUE W/WHITE
	5	LT. BLUE W/YELLOW
	6	LT. BLUE W/YELLOW
	7	LT. BLUE W/BLACK
	8	LT. BLUE W/BLACK
P3	1	BLACK
	2	WHITE
	3	RED
	4	YELLOW
	5	ORANGE
	6	BLUE
P4	1	YELLOW/BLACK
	2	YELLOW/RED
	3	YELLOW/WHITE
	4	EMPTY
	5	EMPTY
	6	EMPTY

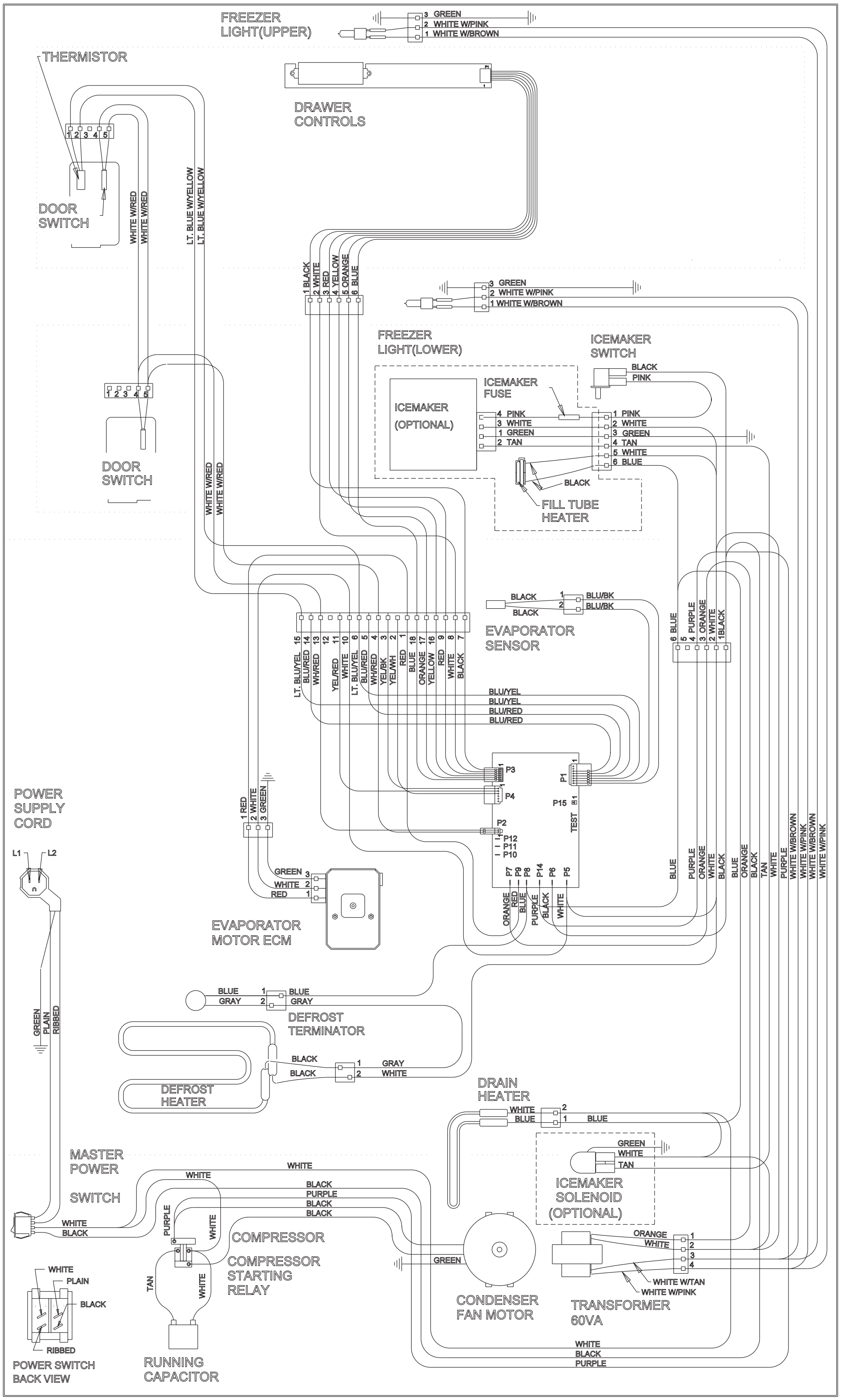
AUXILIARY CHART

TERM.	DESCRIPTION	COLOR	ABBR.
P1	THERMISTORS	SEE AUX. CHART	WH/YL
P2	LIGHT SWITCH	WHITE/RED	WH/RD
P3	REMOTE DISPLAY	SEE AUX. CHART	-----
P4	CABINET BAFFLES	SEE AUX. CHART	-----
P5	L2-NEUTRAL 115	WHITE	WHITE
P6	L1-HOT 115	BLACK	BLACK
P7	LIGHTS-120V OUT	ORANGE	ORANG
P8	------	-----	-----
P9	EVAPORATOR FAN	RED	RED
P10	------	-----	-----
P11	------	-----	-----
P12	------	-----	-----
P13	------	-----	---
P14	COMPRESSOR	PURPLE	PURPL
P15	MANUFACTURING TEST	-----	TEST

WIRING SCHEMATIC - MODEL 700BR



WIRING DIAGRAM - MODEL 700BF, 700BFI



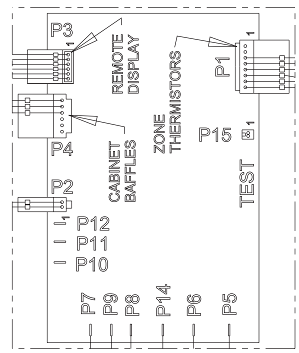
⚠ WARNING

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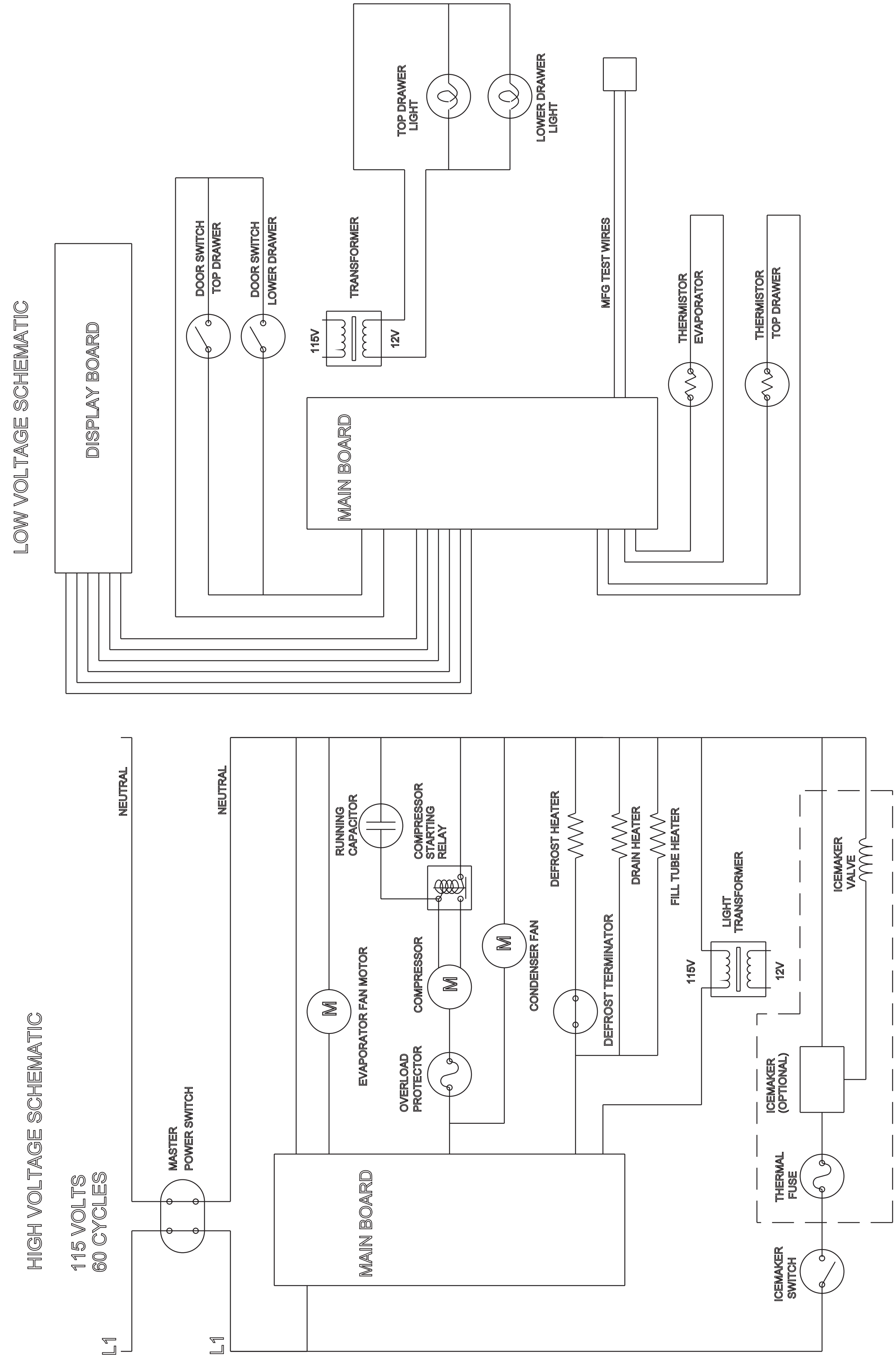
CONTROL BOARD DETAIL

TERM.	No#	COLOR
P1	1	EMPTY
	2	EMPTY
	3	LT. BLUE W/WHITE
	4	LT. BLUE W/WHITE
	5	LT. BLUE W/YELLOW
	6	LT. BLUE W/YELLOW
	7	LT. BLUE W/BLACK
	8	LT. BLUE W/BLACK
P3	1	BLACK
	2	WHITE
	3	RED
	4	YELLOW
	5	ORANGE
	6	BLUE

AUXILIARY CHART

TERM.	DESCRIPTION	COLOR	ABBR.
P1	THERMISTORS	SEE AUX. CHART	------
P2	LIGHT SWITCH	WHITE/RED	WH/RD
P3	REMOTE DISPLAY	SEE AUX. CHART	------
P4	BAFFLES	SEE AUX. CHART	------
P5	L2-NEUTRAL 115	WHITE	WHITE
P6	L1-HOT 115	BLACK	BLACK
P7	LIGHTS-120V OUT	ORANGE	ORANG
P8	DEFROST HEATER	BLUE	BLUE
P9	EVAPORATOR FAN	RED	RED
P10	------	------	------
P11	------	------	------
P12	------	------	------
P13	------	------	------
P14	COMPRESSOR	PURPLE	PURPL
P15	MANUFACTURING TEST	------	TEST

WIRING SCHEMATIC - MODEL 700BF, 700BFI



NOTES